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ART. I.—*Observations on the epidemic Yellow Fever of Natchez, and of the South-west.* By JOHN W. MONETTE, M. D. &c., of Washington, Mississippi.

IN presenting to the medical profession, and to the public generally, the result of my observations and reflections, for nearly twenty years, on the subject of Yellow Fever as it occurs in the south-western portion of the United States, I deem it necessary and proper to premise as follows, viz: that the writer is a graduate of the Medical School of Transylvania in its most flourishing era; when the leading chairs were filled by those eminent men, Professors Dudley, Drake, and Caldwell. As a matter in course, the doctrines taught by them relative to Yellow Fever, were the rule of my faith; and such

as are still entertained by most of the profession, in the middle and south-western portions of the United States. With implicit confidence in their information, judgment, and experience, I adhered to what I believed the true doctrine of Yellow Fever; a doctrine too, which none dare doubt, or attempt to controvert, without risk to his reputation as a man of science and deep medical learning.

By most of the Faculties in our northern and western schools, if we mistake not, it is taught as a settled doctrine, a "*res adjudicata,*" that Yellow Fever is a *high grade of Bilious Fever;* that it is produced locally by local causes, such as a peculiar miasm, or exhalation from certain putrescent matters; and especially from such as constitute ordinary city filth, in alleys, sewers, cellars, and more especially about wharves in commercial cities: that this fever thus generated is confined to the city or district where it originates: that it possesses no communicable properties: or that no exhalation or effusion is disengaged from the body laboring under its influence, which in any manner tends to reproduce that disease in others who are exposed to its influence: that there is no danger of this disease being transported from an infected district or city to one which is healthy; consequently that all quarantine restrictions upon the intercourse and commerce with infected cities and districts, are not only useless, oppressive, inefficient in excluding the disease, but are not sustained by the experience of the enlightened portion of the profession, as consistent with the present state of medical science, in the United States and Europe.

Such were the opinions of the writer; in the comfortable enjoyment of which, no doubt, he would have remained to this day, had not his lot been cast in a region, where it has been his business, from his earliest professional avocations, to see, examine, and treat this disease, under circumstances which compelled him to trace the origin, and causes, and all the circumstances under which it has visited some of the most healthy portions of the United States. Facts have been repeatedly presented which produce the irresistible conviction,

that this disease, in the South, may be transported from one place to another, and there disseminated among a healthy population, so as to produce an epidemic. The circumstances requisite for the certain and speedy dissemination of this disease, are certainly more frequently combined in this latitude than in our northern and middle States. Facts, as observed at Natchez and other southern towns, are such as to confirm, in many instances, the doctrine taught and believed in southern Europe, as well as in some cities of the United States, and especially in those liable to frequent visitations of Yellow Fever.

The first epidemic Yellow Fever which came under our notice, was in 1823. Since that time, circumstances presented by every visitation, have gradually confirmed us in the convictions partially made at that time. Additional facts, and additional reasons have more fully convinced me, that the disease is generally, if not always, imported into Natchez as well as New Orleans, chiefly from Havana and the West Indies. In this belief, for twelve or fifteen years, the writer was almost the only one of the profession in the southwest, who had the courage to declare his sentiments publicly in favor of *importation.* Many who were present at every epidemic, like the great mass of mankind, looked upon the operations of nature, without inquiry, without observation, and without any close analysis of judgment; satisfied to follow blindly in the road laid down by visionary theorists; and which had been generally adopted as *orthodox* and *fashionable.* Ever since the epidemic of 1823, the writer has continued to urge these opinions upon the citizens of Natchez, as well as those of New Orleans; although opposed by the opinions of many excellent physicians, and by the ridicule of those who had nothing better to offer.

Now I have the satisfaction to find that my opinions on this subject are fully sustained, not only by the great body of observing and intelligent citizens, but also by some of the most eminent physicians of this state. Among these are my friends, Dr. McPheeters, and Dr. Davis, the present health-officer of

Natchez. The same opinions are likewise obtaining rapidly in New Orleans, Mobile, and Charleston, S. C. The day is not very remote, when New Orleans and other southern ports may be rendered as exempt from Yellow Fever, as Philadelphia and New York now are. A judicious, timely, and strict quarantine regulation, at each of our southern commercial cities and towns, by excluding this pestilence, will be the wise means of preserving annually hundreds and thousands of lives, and of extending the commerce and prosperity of the people. To the writer, this result would far outweigh all the approbation attainable, by adhering to established opinions, and fashionable errors. We of course expect to encounter the dissent and disapprobation of many distinguished medical men, who have, however, never enjoyed proper opportunities to acquire correct views of this disease in this latitude. I am sustained by many able and learned physicians of the south, when I declare, that our brethren in the great Ohio Valley are greatly mistaken, when they suppose they have seen *true Yellow Fever* north of the mouth of Ohio, unless when rapidly transported in steamboats. But to our subject.

Notwithstanding the great diversity of opinions entertained by medical men, relative to the origin and nature of Yellow Fever miasm, there are a few important facts generally admitted; and from these important deductions are drawn.

It is admitted on all sides that Yellow Fever is the product or effect of a certain deleterious miasm, or poisonous effluvium, operating upon a healthy system unacclimated to its action; that this miasm, malaria, or infection, wherever existing and diffused in the local atmosphere, operates its deleterious influences upon the system, through the medium of the lungs, or by being respired. It is admitted that when this malaria, infection, or miasm, is produced, or exists in any part of a city, in a steady high temperature of autumn, and among a crowded population, it will gradually diffuse itself into the surrounding air, which was previously healthy, and there produce Yellow Fever equally malignant, with that produced by it in the place of its origin. It is also admitted and well known,

that when it diffuses itself through any part of a city, that the whole atmosphere to that extent becomes equally deleterious; and that this deleterious property diffuses itself into houses, rooms, cellars, and avenues, and indeed into every recess, or interstice into which common air can penetrate: that it insinuates itself into the texture of porous articles, in which air largely enters: that ships in port, where Yellow Fever is epidemic, become thoroughly infected, and resist every disinfecting agent except a low temperature, which entirely neutralizes it: that persons from northern climates are peculiarly obnoxious to the influence of this miasm: and that strangers or unacclimated persons passing into an infected district, house, or ship, and there breathing that atmosphere for one or two minutes, or even less, will contract genuine Yellow Fever, and probably die with black vomit. It is also admitted and known, that any infected air, either in open space, in houses, ships, or any other place, becomes entirely deprived of its deleterious and morbific properties, so soon as the temperature is reduced to 32° of Fahrenheit: it is also well known that when a city or any portion is strongly infected, a storm of wind and rain may pass over the city, and even frost may neutralize or destroy all the external infection, while that in closed houses, ship-holds, and other close places, is unchanged until the temperature is reduced to about 32° of Fahrenheit. It must be admitted, that the *removal* of a house or a ship, or any other matter enclosing infected air, does not destroy the infectious virulence, while a uniform temperature is preserved. If this be admitted, it follows of course, that a ship, infected in one port, may sail to another port, and there produce Yellow Fever in those who breathe its contaminated atmosphere. The infected atmosphere of one ship, and especially where several infected ships are contiguous, will and does diffuse itself through the surrounding atmosphere; thus extending the sphere of its morbific influence, in the same manner, as it is admitted that an infected district in a city will finally infect the whole city, where communication is uninterrupted. Besides this process of extension, or of assimi-

lating the surrounding air to its own infectious nature, hundreds of persons, from remote and opposite parts of a city, within a week or ten days, during the time an infected vessel lies in a healthy port, will have direct intercourse with the ship, and thus contract the disease, in the same manner in which persons from the country would do, by visiting an infected city or town. These persons subsequently are attacked with the disease fully developed, in opposite and remote parts of a city or town, where their dwellings happen to stand. In this manner, Yellow Fever, introduced by vessels or steamboats from the wharves, will show itself simultaneously about the wharves and in various remote quarters of the city. Thus those who look for a palpable and visible extension of the disease, like the spread of fire in a city, are at a loss to trace all the cases to one common source.

Again; we know that this *infected air*, confined in a house during the hot sultry weather of August and September, in the latitude of Natchez, will become more virulent than when first confined in that house. This has been fully exemplified during every visitation of Yellow Fever in Natchez. Houses, which were deserted and closed at the beginning of the epidemic, and when the general air was but slightly infected, and when all the inmates of that house were healthy, and continued so in their retreat, have become so strongly infected by being closed, that on being opened, after frost, and after all general appearance of the disease had subsided, they have been fatal to those who have entered, until thoroughly purified by ventilation and frost.

Again; it is well known that during an epidemic visitation at Natchez, equinoctial storms and rains have so swept out the free infection from the streets and open grounds, that the disease for a time appeared to have subsided: but the virulent infection contained in the houses, and which was beyond the influence of the storm and rain, required only a few warm calm days to disseminate itself as widely as ever.

Yellow Fever is indigenous to the tropics, and will not manifest itself epidemically much, if any, beyond the tropics,

unless the infection is introduced from tropical ports in the West Indies. In these islands and other tropical ports of the Gulf of Mexico, Yellow Fever is indigenous, and exists among northern strangers, more or less during the whole year. In these ports it is confined exclusively to the strangers and unacclimated, while those who have been acclimated, or who are natives, are exempt from its influence. Yet as each additional case adds to the virulence of the general infection of a port, a large number of foreigners in port at such time, causing the disease to spread and rage with extraordinary violence, have repeatedly caused the infection to become so unusually virulent, that many of those who were supposed acclimated, have contracted the disease, and even have died.

As a general rule, the natives of tropical cities seldom experience an attack of the disease; and even where it becomes epidemic among them, as it has been occasionally, it assumes such a mitigated form as to present entirely a different aspect from the same disease in strangers.

Hence the inference is sanctioned by every principle of induction, that Yellow Fever as it presents itself among northern strangers in the West Indies, is an *artificial* disease in those ports, a disease which would be altogether unknown among the natives of the West Indies, were it not for the constant influx of northern strangers into their commercial ports. Even in New Orleans this disease would be almost unknown as an epidemic, were the city protected from the hundreds of strangers and European emigrants, who crowd the wharves and vessels from June to October. The disease could not spread without them; it would be like fire without fuel; it would die by its own action. The infection annually introduced into that city from Havana, and other tropical ports, would be comparatively harmless, were it not for the strangers and unacclimated, who serve as fuel, not only to give action and energy to the fire, but likewise to extend its ravages over the city among those who are imperfectly acclimated. The name of "*Stranger's Fever*," by which

it is designated in many tropical ports, indicates its true origin and prevalence.

It is a well established fact, that unacclimated persons, from northern latitudes, who visit an infected port, or city, or who pass through an infected district, or breathe for only a few moments the infected air, will thereby contract Yellow Fever, which will develope itself in five or six days, as a general rule; and often in a less time. The infection is received through the *lungs, by respiration;* and its morbid impression is communicated to the system in the first five minutes of time—and often by the first few respirations. The person who is thus exposed, may travel by steamboat or other conveyance, to remote points, even two or three hundred miles from the point of infection, and there be seized with the disease in its most aggravated form. The distance to which he may travel while the infection is dormant in his system, does not in any wise modify or mitigate the violence of the attack. Thus within a few days, it is possible for twenty or even fifty persons, who have contracted Yellow Fever infection in New Orleans, to be attacked with that disease fatally in Natchez, where all are healthy. This is more likely to occur, as the direct daily intercourse by steamboats between these two points is uninterrupted and extensive. Goods and freight of every kind, and passengers, are continually arriving in great numbers every day; and when the first alarm or declaration, of Yellow Fever as an epidemic in New Orleans, is made public, many strangers and new-comers immediately leave for Natchez and other interior towns. Thus a large supply of infected persons and goods are landed at Natchez within the first three weeks after the disease is epidemic in New Orleans; and a gradual supply is kept up for weeks afterwards. Hence Natchez becomes infected with Yellow Fever within three or four weeks after it has become epidemic in New Orleans. This point and others analogous we shall endeavor to establish as we progress.

The history of every Yellow Fever epidemic in Natchez proves beyond doubt, that those who remain in the city dur-

ing the gradual increase of the pestilential miasm, acquire a partial immunity to its action, by what is termed acclimation; but when this infectious miasm becomes more virulent from concentration, these partially acclimated persons are generally liable to its attack in its most aggravated form. Natives of New Orleans, and those thoroughly acclimated in cities subject to frequent visitations of Yellow Fever, acquire an entire immunity against its influence. With such there is no apprehension of danger from the disease; and the period of Yellow Fever epidemic is to them the most healthy of the whole summer; for they are at that time liable to no other diseases. This remark we have heard repeatedly from the acclimated citizens of New Orleans, declaring that the period of the epidemic is the most healthy of the whole year, for those who are thoroughly acclimated.

We have said that infected air, such as exists in every part, avenue, recess, and interstice of an infected part of a city, becomes more virulent in proportion to its confined condition, in a temperature but little under that of a tropical summer, or between 85° and 90° of Fahrenheit. If the temperature of the confined air be near or above 80° it will rapidly increase in virulence; and more slowly in proportion as it is below 80°. Confined rooms, ship-holds, and bales and boxes of porous goods, retain the infected atmosphere very near at the usual noon-day temperature; consequently it becomes more virulent than the free portion which is by night reduced 25 or 30° below the noon-day temperature. All porous articles as bales of blankets, and feather beds, contain by far the largest portion of their bulk of air. This air is such as that from which they are removed. A bale of blankets compressed until the whole air is expressed will be reduced to less than one third of its original bulk. A feather-bed of ordinary size contains probably 25 lbs. of feathers, in a bed-tick having a capacity for 24 cubic feet of air. The air constitutes the great bulk of the feather-bed; for if the bed be compressed until the whole air is expelled, the bed will be reduced to a solid form, and to a bulk *not exceeding* two cubic feet at most. Thus we should in

an infected feather-bed have about 22 cubic feet of infected air. This can be transported undiluted for any reasonable distance, even 500 miles. The infection carried by such articles in confined vessels becomes more virulent while the temperature is near or above 80°, and constitutes what is known as *fomites*, or the *most virulent infection*. The fomites in such articles becomes much more virulent upon the human system, when, in addition to the free atmospheric infection, from which they have been taken, they have been saturated with the exhalations and secretions, from bodies laboring under Yellow Fever in its most aggravated form. Such *fomites* are active in producing Yellow Fever in those who handle and sleep on those articles. Hence a smaller portion of this grade of infection inhaled, will excite Yellow Fever, than of the free infection. The secretions and exhalations of a body laboring under malignant Yellow Fever, even in a pure air, will so saturate and infect the bed and bedding of the patient, as to be capable of exciting the same disease, and of the same grade, in those who shall weeks afterwards sleep on, or handle them; provided they have been subsequently shut up in a room or confined in a chest. This fact has been repeatedly established in the different visitations of New Orleans and Natchez. Hence it is unsafe for beds, and bedding, to be carried from an infected city into the country and there used: but it is extremely unsafe to carry and use such beds and bedding as were used by patients diseased with Yellow Fever. Cases of this kind will be stated as we progress.

The transportation of a bed or bedding in the confined hold of a ship or steamboat, does not change the nature or virulence of the infected air contained, but it actually becomes more virulent by remaining confined in a close room, under a high temperature. Hence after a trip of three or four days sail under a tropical sun, where the lowest temperature within the vessel is between 88° and 90°, the infected air becomes more virulent than when the vessel was in port, and the danger springing from such source is in the same proportion greater.

An individual, sleeping upon a feather bed, or on other spongy bodies, whether charged with healthy or infected air, necessarily breathes more or less of the air contained. His body presses out of a feather bed, a portion of air equal to the bulk of the body. This air expressed settles around him and is immediately respired; other portions of it are diffused in the contiguous air of the room. Additional portions are successively pressed out by each movement or change of position, and are likewise respired and diffused in the immediate atmosphere. Thus in one night, a healthy individual will press out the greater part of the air contained in the bed on which he sleeps. If that air be infected, he will unconsciously have been breathing more or less of the strongest infection during the night. Should this individual be travelling, he may be attacked with malignant fever several days afterwards, and possibly more than a hundred miles from the place where he received the infection. Such are the circumstances of cases, sometimes adduced by those of contracted observation, to prove that Yellow Fever is sporadic, and of diverse local origins. The disease is seen, and its character is incontestible; but the source from whence it was derived is either forgotten or entirely overlooked.

In this manner, doubtless, are produced many of the cases called sporadic, in the vicinity of infected towns, ships, and houses. Tales of this kind can be passed off currently upon northern men, where genuine Yellow Fever is *scarcely known:* they can also be imposed upon enlightened medical men who have never seen this disease, and who are tied down to received opinions, and pre-conceived theories. To those who live in or near the tropical regions, where Yellow Fever is no stranger, and where all its habits, customs, and characteristics are familiar, these theories pass as an idle dream.

Thus far it matters not from what source, or in what manner, the poison of the Yellow Fever is produced; nor in what manner its effects are produced on the system. We will call it *infection;* and we will admit, for sake of argument, that it is produced from any source which may suit the fancy of the

reader. All admit that the local atmosphere of certain places becomes infected with this morbific poison, and that Yellow Fever is the result; that the local atmosphere may be partially, or more strongly charged with this infection, producing the proper Yellow Fever malaria.

As to the nature, composition, and properties of this malaria or poison of Yellow Fever, we know nothing, except from its effects upon the human system. Of its qualities and *modus operandi* upon the human system, we know only by induction: from facts and repeated observation where it prevails, we deduce some of the general laws of its operation.

Its effects upon the healthy system in the production of its peculiar disease, according to Baron Larrey,* is through the medium of the lungs. This view of its operation upon the system is sustained by many distinguished men, who have been familiar with the Yellow Fever in all its grades, in the West Indies as well as in the United States. My friend, Dr. Cartwright of Natchez, very correctly locates its primary action upon the pulmonary tissues, being inhaled with the common air in respiration. He conceives that its morbific influence upon the system is conveyed from the lungs, through the medium of the ganglionic system of nerves; and that the disturbance of all the organs and functions of animal and organic life, consequent, constitutes Yellow Fever.† We consider the point established beyond controversy, that Yellow Fever is communicated chiefly, if not entirely, through the air respired; and not by any contact, or any palpable matter otherwise applied.

One point most unsettled in relation to Yellow Fever is, whether bodies laboring under Yellow Fever are capable of eliminating, or throwing off any exhalation, or effluvium, possessing or deriving peculiar morbific properties. Yet the general clinical regimen, and precautionary measures inculcated, even by those who deny any contagious properties, tend strongly to convince the unprejudiced observer, that *all par-*

*See Quarterly Journal of Foreign Med. for April, 1832.

†See Med. Recorder, vol. 9, p. 37–8-9, &c.

ties do admit the principle; although some deny the fact. The general admission of those who disclaim prejudice on either hand is, that when Yellow Fever makes its appearance as an epidemic, in any port, city, or town, each and every additional case tends still further to contaminate the air; in other words, to increase the infection which is abroad. Those who have been frequently conversant with this disease in the southern ports and towns of the United States, and in the West Indies, untrammelled by prejudice or theory, and governed by their own repeated observation, admit this fact without hesitation or argument. Those who are altogether unacquainted with the visitations of this disease should hardly hazard a contrary opinion on the subject.

If one body, or any number of bodies, laboring under this disease, in the midst of a dense population, can possibly have any agency or influence in rendering more virulent an atmosphere already infected, it must be by imparting to it some morbific property. It certainly can not proceed from *diminishing* the amount of infection already abroad. Each portion of the malaria consumed by each individual in developing a case of the disease, must certainly diminish the general amount. The multiplication of cases should therefore diminish instead of increasing the virulence of the infection, if some morbific influence were not super-added from each new case. Each new case therefore becomes a new source of atmospheric contamination. If any thing be imparted to the local atmosphere from a case of Yellow Fever, it must be thrown off in gaseous and invisible form from the body; either by respiratory exhalation, or by insensible perspiration from the skin. Observation and experience have fully shown that it is not from any palpable excretion from the alimentary canal, or from any peculiar palpable virus.

The skin and lungs are two of the greatest emunctories of the human system, and carry off in a gaseous form more fluids than all the other excretories together. The skin alone throws off by insensible perspiration, in form of gas or vapor, about five pounds of fluid in twenty-four hours. This in form of va-

pour will occupy a space in the free air equal to the dimensions of a large room, or equal to the entire size of the largest balloon.*

In the period of twenty-four hours the amount of fluid thrown off from the lungs in a gaseous form, is at least thirty *per cent* greater. Respiration throws off into the air a large amount of contaminating affluvia, and tends to deprive the free air of its healthy properties, even while the body is in a state of perfect health. The quantity of gaseous fluids exhaled from each of these emunctories in disease, such as ardent Yellow Fever cannot be less than in health. Consequently every individual of adult age, laboring under Yellow Fever, throws off into the surrounding atmosphere a volume of vapour equal to at least five thousand cubic feet every twenty-four hours. This is unquestionably morbific to a certain extent, and to that vitiates or contaminates the free air. To what extent then must the atmosphere of a house or vessel be contaminated when there are several cases of malignant Yellow Fever, in a comparatively circumscribed and confined atmosphere? Independently of this contamination, the air is still further vitiated by the change which respiration effects in the properties and constitutional elements of the atmosphere respired.

A portion of the exhalations thrown off by these two great emunctories, in disease, is condensed and absorbed by the bed and bedding used by the patient; the remainder is diffused into the surrounding atmosphere. That portion diffused in the free air becomes dilute, and partially loses its virulence; while that confined in the bed and clothing acquires an increased degrée of virulence. If this is not the case why do non-contagionists enjoin strict cleanliness and free ventilation, about Yellow Fever patients?

We are told that those exhalations and secretions are morbific in a general way; but do not produce Yellow Fever especially. Do they fear the production of ordinary disease

*See principles of expansion by evolving latent heat, by Prof. Espy on storms.

more than Yellow Fever from these unhealthy effluvia? If they have any tendency to produce disease at all, it is surely none other than Yellow Fever; the identical disease from which it is eliminated.

We are not prepared to prove at what stage or period of Yellow Fever the morbific effluvia are eliminated, which are most active in producing this disease in healthy individuals. Baron Larrey, with much plausibility, supposes that there is a particular period of Yellow Fever, when the infectious effluvium from the body is more virulent, or is thrown off in greater quantities. He supposes that this period of the disease is of but short duration, after which the effluvia from the body are much less virulent. In this particular, if Yellow Fever presents any analogy to other contagious, or exanthematic fevers, the most contagious or infectious stage must be during the first two days; or while the excitement is active and the febrile *erethem* is upon the surface. After the excitement subsides, and the erethem retires, the activity of the morbific effluvia begins to decline.* The palpable excretions, such as the urine, fæces, and black-vomit discharge are entirely harmless as a cause of Yellow Fever in those who handle or taste them; and equally so when taken into the stomach.

But it is contended by some that the exhalations and excretions of persons laboring under any and every disease, in a confined air, are to a certain extent morbific; and that in this respect, Yellow Fever is at most only such in a higher degree. This is a false argument. The sickly effluvia, and the palpable filth which might accumulate in a close chamber, would certainly offend the senses and produce some disturbance of the functions of organic life. But if this disturbance were uniformly and invariably of the same grade and variety of disease as that from which those offensive excretions emanated, it would be called contagion or infection by the most sceptical theorist.

Does any non-contagionist enjoin the free ventilation and strict cleanliness in Yellow Fever rooms and wards, for fear

*See Townsend on Yellow Fever, of New York, p. 288.

those offensive effluvia may produce in others, remittent fever, rheumatism, or gout, measles, or anthrax? No: they apprehend an aggravation of the Yellow Fever malaria, which is to reproduce in others the *identical disease* of Yellow Fever, and no other. According to their prejudices, this may not be contagion, but it bears a striking analogy. We doubt not that *all epidemics*, to a certain extent, are contagious, or that an accumulation of cases in any one house or street, tends greatly to increase the virulence of the disease in that quarter, as well as its more rapid extension.

There are two kinds of morbific matter eliminated from bodies diseased, and which tend to reproduce the same disease in others. This matter is called contagion or infection. The one is a palpable matter of secretion; the other is an invisible gaseous exhalation. Some diseases throw off one kind of infection and some the other. Others, such as small pox, plague, and malignant erysipelas, throw off both kinds of infection: others again, as syphilis and the vaccine pock, are communicated only by a palpable virus. Of the gaseous infections, some are so mild as scarcely to be estimated, especially in unconfined air. Others are more active, but still are greatly diluted or neutralized by free pure air; such are yellow fever, cholera, typhus gravior, and some others. Some, such as small-pox, throw off such a virulent and subtle effluvium, as to prove infectious under nearly all circumstances, to the distance of a few feet from the patient, and in almost all degrees of temperature. Some diseases disseminate their infectious effluvia in hot sultry air; others in a cool damp atmosphere; others in an atmosphere charged with human exhalations. Each disease, which is not actively contagious or infectious, under all circumstances of seasons and temperature, becomes so under certain peculiar circumstances. Of this class is Yellow Fever, which gives off an effluvium which *becomes* morbific or infectious under the proper circumstances.

In relation to Yellow Fever, the great error of both parties, is *ultraism*. The advocate for contagion or personal infection seems to believe it impossible to originate or disseminate

the disease in any other manner. His opponent, equally scrupulous of consistency, believes that certain circumstances independent of personal infection, do sometimes originate Yellow Fever; and therefore the disease, when produced, must be entirely free from any contagious or infectious properties. Upon this last assumption, we may ask, whence did the first case of small-pox originate? Nature is not parsimonious in her operations for the production of disease, any more than in the other exhibitions of her power. A disease may certainly originate from some peculiar exciting circumstances, independent of personal contagion; and still, when once produced, it may possess properties more or less infectious. The first case of contagious disease certainly did not originate from personal contagion, but entirely independent of it. The same causes may still produce similar effects.

If a disease possess the properties of reproduction, even once in a hundred cases, and under the most favorable circumstances, it certainly has some claims to be acknowledged an infectious or contagious disease. The contagion or infection is specific, because in all cases it produces the same disease as that from which the infection emanated. A disease which spreads by personal infection alone, makes but slow advances through any community, and generally from one individual to another in regular and slow succession. Infectious diseases, assuming an epidemic character, proceeding from an infected local atmosphere, attack a number of individuals almost simultaneously, or in close and irregular succession. Yellow Fever proceeds in the latter mode; and each case tends to extend the limit of the first or local source of infection, until checked by frost, or by a strict non-intercourse with the healthy population. Small pox does not spread in a city in this rapid and irregular manner.

Dr. Rush is the great father of the doctrine of the local origin of Yellow Fever, from putrescent matters, and from city filth. The doctrine taught by Dr. Rush on this subject, enforced and promulgated as it was by his popularity, talents, and industry, has doubtless been the destruction of thou-

sands. Had it not been for his influence in the medical community of the United States, our northern sea-ports would not have been so long subject to the pestilential visitations of Yellow Fever. New York, Philadelphia, and Boston, and other ports of less note, would have protected their citizens by a judicious quarantine, at least twenty years sooner than they did. The southern ports, still acknowledging a vassalage to his authority, and to his arbitrary dictation, through his disciples, to this day immolate hundreds and thousands of victims annually upon the altar of a blind incredulity. But the dawn of their emancipation begins to shadow forth a more discriminating era. A short time yet, and Yellow Fever shall be excluded from Charleston, New Orleans, and all the southwestern ports of the United States. Then this moloch, set up by Dr. Rush, shall no longer devour its living hecatombs of innocent people for its autumnal repast.

At the time when Dr. Rush sought to establish his theory of a local and domestic origin of Yellow Fever, in contradistinction to that which ascribed it to a foreign source, and to imported infection, people were paralyzed with fear at the horrid ravages made by it in their cities. They believed it communicated *exclusively by personal contagion;* and under this conviction the sick were abandoned to their fate, and deserted by friends, and attendants, to perish alone, in neglected despair. None but the strongest of all human ties, those of parental or conjugal love, were able to keep the friends and attendants where certain death seemed to lay in wait for them. Like men in the plague, the plague-spot was a signal for hopeless despair and solitary death.

Feelings of humanity prompted that good man to combat the belief which seemed to sever all the bonds of friendship, and abandoned the sick to their fate. In his zeal for philanthropy, he plunged into the opposite extreme, and was instrumental in throwing off all means of precaution, and to expose whole cities to be ravaged by the worst of plagues. He exerted every influence and urged every argument to convince the people, that the Yellow Fever, with all its horrors, was

free from any contagious or infectious properties; that unacclimated persons, with perfect impunity, might occupy the rooms, beds, and clothes of bodies laboring under this fatal disease, while continually exhaling its pestiferous effluvia. He endeavored to show that the exhalations and excretions from Yellow Fever patients were as free from morbific agency, as those from the simplest intermittent.

If he had stopt here his name might still be blessed by many; but he hesitated not to blind the popular judgment, and induce them to adopt a system of police, calculated in practice, to introduce the pestilence into the ports almost every year. He was indefatigable in his exertions to convince the people that the disease was exclusively of local origin, within their cities, and from causes entirely under their control; that there was no such thing as an infected ship, coming from an infected port; that when infection and death began to spread about the wharves, vessels, and those having intercourse with them, all proceeded from some small source of putrescent matter, to some rotten potatoes, coffee, or some other equally inoffensive substance, which may have been thrown or spilt about the wharves. In this he presumed upon their want of discrimination in such subjects, where he knew the people could not judge. Hence setting aside what appeared to them hypothesis and speculation, he pointed them to such matters as would strike the grosser senses of sight and smell; to city filth in alleys, lanes, and sewers; to putrid animal and vegetable matters;* things too, by the by, which had existed in an equal degree a thousand times before, in the midst of uninterrupted health.

It is now time to arrive nearer the goal of truth; and to point out where truth and error meet; to lay aside the trammels of authority, and the prejudices of education, that we may view things clearly, patiently, and with proper discrimination. To this end we desire to contribute our feeble aid, and hope we shall be heard with patience, and with a desire

*See Rush's Works, vol. 2; edition of 1815; Yellow Fever of 1793; Medical Inquiries.

more to arrive at *truth*, than to sustain any theory or preconceived doctrine.

Notwithstanding the zeal with which Dr. Rush labored to establish his theory of the domestic origin of Yellow Fever in our commercial cities, he has also left on record proof and admissions of all that we contend for, or wish to establish. Although he contends that it is of local origin, and is not contagious, yet he clearly admits that under *certain circumstances* it does reproduce itself; or will spread in *impure* or *miasmatic* air. This air is rendered impure or miasmatic, by certain states of vegetable and animal putrefaction in certain states of the weather. This fact we also admit; but deny any agency to the animal or vegetable putrescency.

Dr. Rush says, "Yellow Fever is not contagious in its simple state, and spreads exclusively by means of exhalations from putrid matters, which are diffused in the air. That it does not spread in the country, when carried thither, from cities in the United States; that it does not spread in Yellow Fever hospitals, where they are situated beyond the influence of the impure air in which it is generated; * * * that it generally requires the co-operation of an *exciting* cause, with miasmata to produce it."*

Yet he admits in another place, that Yellow Fever exhalations and secretions, accumulating in close filthy rooms, even in the country, will become infectious. He says, "I have heard of *two or three instances*, in which Yellow Fever was propagated by these means *in the country*, remote from the place where it originated, as well as from every external source of *putrid exhalation*."† If a disease assume a contagious character only *occasionally*, it should be ranked as a contagious disease.

He also admits that Yellow Fever may be contracted by "a person *sleeping in the sheets, or upon a bed impregnated with the sweats and other excretions*, or by being exposed to the smell (breathing,) of foul linen, or *other* clothing of per-

*See Medical Repository, vol. 6, p. 156, &c.
†Ibid. p. 157.

sons who had the Yellow Fever."* Also, "that it was once once produced in Philadelphia *from the effluvia from* a chest of unwashed clothes, which belonged to one of our citizens who had died with it in Barbadoes; but it extended no further than to the person who opened the chest."

Now what was this if it were not contagion, or infection, created from a patient laboring under disease? a contagion, too, which could remain enclosed in a trunk, in a healthy ship, and in this manner be transported unimpaired in virulence, for 2000 miles? It was a *specific* contagion, producing the *same disease* in a healthy system, as that from which it was eliminated. Dr. Rush also admits that occurrences of this kind would be more frequent, were it not for "the *superstitious dread of contagion*, which has generally produced *great care*, not only in washing sheets and clothes, and airing beds supposed to be infected, but frequently the total destruction of them by fire."† Thus, according to Dr. Rush's admission, Yellow Fever would be imported much more frequently were it not for that "*superstitious dread*" which prompts to every precaution necessary for its exclusion. Strange that he should have labored to prove that this disease is produced exclusively by putrid effluvia about wharves, &c.

At the same time, the united talent and experience of the whole medical profession of the United States and Europe was in direct contradiction to the doctrine of the local origin of Yellow Fever, from filth and putrid effluvia. The College of Physicians, of Philadelphia, in reply to a call from the Governor of the State of Pennsylvania, after mature deliberation, made the following report in 1793, viz:

"No instance has *ever occurred*, of the disease called *Yellow Fever, having been generated* in this city, or in any other parts of the United States, as far as we know; but there have been *frequent instances of its having been imported*, not only into this, but into other parts of North America, and prevailing there for a certain period of time. From the rise, progress, and nature of the malignant fever, which began to prevail here

*Med. Repos. vol. 6, p. 156, &c.
†Ibid.

about the beginning of last August, and extended itself gradually over a great part of the city, we are of opinion that *this disease was imported into Philadelphia* by some of the vessels, which arrived in port after the middle of July. In this opinion we are further confirmed by various accounts received from unquestionable authorities."

Signed by order of the College of Physicians.

JOHN REDMAN, *President.*

November 26, 1793.

This opinion of the College of Physicians was sustained by the great body of the medical faculty in the city, as well as in the United States. Dr. Rush and a few others contended that the whole epidemic of 1793 originated in a lot of spoiled coffee!!* Subsequent epidemics he ascribed to putrid hides and potatoes.

Dr. Litton, an eminent physician and contemporary of Dr. Rush, speaking of the Yellow Fever which prevailed at Wilmington, Delaware, in August, 1798, says: "*No one doubted its having been brought from Philadelphia,* in the infectious bad air in boats and shallops," &c.; also, he says, it began about the water's edge, and spread gradually up to the highest streets; having first appeared in August it became epidemic by the middle of September.†

Relative to the same epidemic, Dr. Geo. Monroe says, it was clearly traced to an infected vessel from Philadelphia, then at the wharf; and that the portion of the town near the wharf suffered most severely.‡ The temperature of the atmosphere, and the state of the season being suitable for the propagation of the disease, it soon assumed an epidemic character. Dr. Rush himself admits, that when the atmosphere is highly infectious, or "charged with the miasmatic effluvia, or 'pestilential exhalations,' *a single case of Yellow Fever will excite* it in a whole family."§

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*See Med. Inquiries, Yellow Fever of 1793,
†See Med. Repos. vol. 3, p. 128-30.
‡Ibid. p. 136, &c.
§Med. Repos. vol. 6, p. 160.

These facts are not adduced by these men as evidence of *personal contagion* in Yellow Fever; but as showing clearly that the contaminated, or infected air from the holds of ships, may be so diffused about a wharf as to produce Yellow Fever in those who breathe it, after residing in a miasmatic atmosphere. Although they do not admit that there is any peculiar contagion, or infection, contained in such vessels; yet they believe it is an impure, or infectious air, capable of producing Yellow Fever in those who breathe it, and of diffusing itself with morbific virulence in the surrounding air, when the latter is contaminated with miasmatic exhalations; but that in a pure atmosphere, free from these miasmatic exhalations, it is innocent.* This admits a great principle, which is equally important, as if it admitted direct infection or contagion. It admits that from whatever cause, a ship may introduce Yellow Fever from one port into another. Yet they contend, that in a healthy pure atmosphere, this infection will not spread so as to bring on an epidemic; that only those who go on board such vessel are liable to contract disease from it; and that those who are thus attacked can communicate no disease to others unless the air is highly contaminated by miasmatic exhalations.

This contaminated state of the air, which is said to be requisite for the dissemination of Yellow Fever, presents precisely the condition we deem requisite for its propagation as an epidemic. But Dr. Rush and others, compelled to admit the truth and force of these facts, endeavor to evade the true inference, by ascribing all the morbific influence and Yellow Fever predisposition, to a previous state of the local atmosphere; leaving to the malaria from the vessels, only the agency of an *exciting cause.* In this view of the case, the seeds of this peculiar disease had been previously imbibed, and continued in a dormant state, until the *exciting* cause of miasm warmed them into life. This would place the infectious air, or malaria of ships, which is known to produce Yellow Fever, in precisely the same relative agency as fatigue, exposure, or

*Med. Repository, vol. 3, p. 200.

dissipation, in all its forms. On this principle the disease excited into action, should be as various as are the forms of disease induced by such causes.

The followers of Dr. Rush have greatly extended his discoveries into the mysteries of Yellow Fever miasm. Since his time, it has been discovered that, not only putrescent coffee, Irish potatoes, and city filth, which offend the senses, but that numerous other sources are equally active in producing epidemic Yellow Fever. Although all experience and authority concur in admitting that Yellow Fever infection, when prevalent, is an invisible, inodorous, and aerial poison, which cannot be perceived by any of the senses, nor be detected by any chemical analysis, yet the followers of Dr. Rush look exclusively to the *fœtor* of *putrefaction*. When Yellow Fever makes its appearance in a city, or in any port, a search is immediately undertaken for the source of the infectious miasm. The first matters in a state of decomposition, whether animal or vegetable, are at once hailed as the fountain and source of all the pestilential miasm. If neither of these be found in the proper direction, some filth nearly allied to a combination of both are sought and most generally found!!

This continues to be the case, notwithstanding these fœtid effluvia have been tested experimentally, and found to contain no principle actively deleterious to health. Epidemic Yellow Fever is still traced to matters which are offensive to the *olfactories*, notwithstanding all experience proves that the most active infection of Yellow Fever cannot be distinguished by any of the senses from common air. Instead of pursuing the dictates of reason and experience, these inquirers are too frequently "*led by the nose;*" and when nothing else presents of sufficient importance, all the pestilence is traced to a filthy back-yard, a wet sewer, a dead rat, or a rotten Irish potatoe.

Others guided in their observations by a sincere desire to arrive at truth, have been indefatigable in their efforts to discover the true source of this mysterious poison. The medical profession have been unremitting in their exertions to detect

the origin and nature of this poison. But all theories which trace its source in the United States, to animal or vegetable putrefaction, or to both jointly, must be abandoned, as inapplicable to our southern ports at least. In many cases acute inquirers have supposed they had traced the monster to his den; but when they have attempted to place the shackles upon him, he has vanished. Others again, repudiating the putrefactive origin, have sought other sources widely different from either. Knowing it to be an invisible gaseous poison, beyond the test of any of the senses, they have directed their inquiries to atmospheric causes. At one time it has been traced to a long continuance of high temperature at certain seasons of the year. At another time it has been traced to great and sudden vicissitudes of weather; such as heat and cold. At other times, to electricity, or to a mysterious epidemic constitution of the atmosphere, without any other definite idea. All these, at times, may have exerted some influence or agency, in modifying the action of the poisonous miasm; but they certainly could not have been the primary active source of the disease. They may have increased or diminished the susceptibility of the system to its action, or so modified that susceptibility, as to cause the morbific effects upon the system, to appear more or less the immediate consequence, from the efficient malaria, or infection.

In the further consideration of this subject, we shall briefly examine the most prominent theories or hypotheses relative to the prime origin of the Yellow Fever epidemic miasm. We shall next show, from American authorities, that Yellow Fever has been repeatedly introduced by infected vessels into the ports of the United States, and that the most malignant epidemics were the consequence. Our views of the manner of introduction and dissemination in the south-western ports, will be fully exemplified in treating of the epidemics of Natchez, as well as in relation to the prevalence of Yellow Fever in many ports and towns of the south-west in the summer and autumn of 1839.

(TO BE CONTINUED.)

ART. II.—*A Case of remarkable and speedy recovery from severe injury of the Spinal Column.* By SOLON BORLAND, M. D., of Memphis, Tenn.

Believing that, in regard to the importance of the structures involved, the severity of the lesion, and rapidity and completeness of restoration, the following case has no parallel on record; that it demonstrates an amount of strength and elasticity in the *medulla spinalis*, not usually supposed to exist; and, for these reasons, deserves the notice of the profession: I submit an account of it for publication.

Early on Sunday morning, 2nd May last, Dr. James R. Christian called, in haste, at my office, and requested me to visit, with him, a man at the flat-boat landing, who had received a severe injury. We reached him about half an hour after the accident.

Case.—Wm. E. Hall, a sailor, aged 20 years, rather below the middle stature, of symmetrical form, stout, muscular, athletic, and in fine health, was seated in a flat-boat, on one of the sills which was about four inches above the level of the floor; his lower limbs were extended and apart, and his body bent forward. The roof of the boat, covered with several tons of wet corn, suddenly fell in, crushing him down, until his face and breast lay pressed upon the floor between his legs. Four or five minutes elapsed before he was extricated.

We found him presenting the symptoms of violent concussion of the brain: entire insensibility, intermittent and slightly stertorous respiration, much froth about the mouth and nostrils, pulse barely perceptible. There was contusion of the nose, and of the upper portion of the back, with extensive and severe ecchymosis of the cheeks, forehead, right side of the neck, and right shoulder; and blood was trickling from the eyes and ears. Proceeding to examine the spine, we found, upon tracing it from its upper and lower extremities, that it was entire, and apparently uninjured, except at the articulation between the *last dorsal* and *first lumbar vertebræ*. The integuments at this point were much contused. The ar-

ticulation was completely torn asunder, all its ligaments ruptured, the spinous process of the superior vertebra broken off, and the articulating surfaces of the two vertebræ nearly two inches apart; two fingers being easily passed between the vertebræ, without encountering any bony resistance. When the patient was turned on his side, the spinal column formed, at this point of separation, an angular projection of about 100 degrees; the prominence of the dorsal region presenting somewhat the proportion and aspect of a camel's hump. Naturally concluding that the case was beyond the reach of human aid, and that in a few hours, at most, death must close the scene, we expressed that opinion, and retired. Imagine our surprise, when, at the expiration of about three hours, we were again called to the patient, and informed that a change for the better had taken place. Accompanied, now, by Dr. Wyatt Christian, we hastened to the boat. We found the patient partially recovered from the cerebral concussion, with restored sensibility, in great pain, tossing violently from side to side, and moving the lower limbs with some force: his pulse still very frequent, and scarcely less feeble than at our first visit, and his skin rather cool. His eyes, now open, were intensely red--the conjunctiva, like clotted blood, at least three lines in thickness, rising round, and encroaching upon the cornea. Apprehensive, from present appearances, especially from the movements of the lower limbs, that our previous diagnosis might have been hasty and inaccurate, we now proceeded to make another examination of the spine. Its general aspect was unchanged; and upon a minute, careful, and protracted examination, both the Drs. Christian, and myself, could not hesitate to concur in the declaration—that *the spinous process of the last dorsal vertebra was broken off*,—that *the articulation of that vertebra with the first lumbar was completely sundered, and the articulating surfaces of the two bones nearly two inches apart.* It was now evident, however, that the *medulla spinalis* was not ruptured, as we had, at first, supposed; nor, indeed, materially injured; for both sensation and motion were almost perfect below the point of lesion. In

view of all the circumstances, while we admitted their extraordinary nature, and wondered how "the silver cord" had maintained its integrity, it was impossible for us to doubt the accuracy of our present diagnosis; for if it be true, as the ancient adage has it, that "seeing is believing," we felt warranted, by the concurrent evidence of *feeling*, in this case, in according to our impressions the force of positive knowledge. From the extent and severity of the injury our prognosis was still unfavoroble. We gave him 3i tinct. opi., and directed its repetition if he should be restless at the expiration of an hour; promising to see him again in the evening. During the afternoon, he was carried into town, to more comfortable quarters. The tinct. opi. had been repeated, and he had slept a little. He was then tolerably quiet, but complained of some pain and great thirst; talked a little, but rather incoherently; pulse 125, quick and feeble, but with rather more volume than in the morning; ecchymosis of the face and neck somewhat lessened; eyes still like clots of blood surrounding the deep set cornea; skin cool and moist. Did not examine his spine, as he was lying on it, and suffered great pain on motion. Directed the administration of the opiate, *pro re nata*, until he should be visited again.

May 3rd. Afternoon. Saw him with the Drs. Christian, and Dr. Frayser. Expression of countenance good, ecchymosis very slight, eyes still deeply blood-shot, entire rationality, composed, does not complain of pain except when moved, soreness of all the muscles, moves the lower limbs freely, passed urine this morning, pulse 120 and fuller than on yesterday evening, skin natural. A thorough examination of the spine was not now made, on account of the pain it gave him to be moved and handled. It was found, however, that continued lying on his back, on a hard bed, had nearly straightened the spinal column, and approximated the sundered vertebræ; so that upon the slight examination Dr. Frayser was able to make, he only detected the fracture of the spinous process. The patient was soon placed upon a pallet of quilts on the floor, with instructions to lie constantly on his back.

The treatment, from this time, was quite uniform and simple; consisting of opiate and aperient medicine, *pro re nata*, and a spare farinaceous diet. The patient rapidly improved, suffering little or no febrile reaction, at any time, during his confinement, and sleeping well at night. The ecchymosis, contusion, muscular soreness, and injection of the eyes, speedily disappeared; and all the functions resumed their healthy play. At the end of two weeks he was able to sit up; in a few days more to walk about the room, steadying his steps with a cane; and at the expiration of four weeks he returned, on foot, to the boat, a distance of half a mile.

A few days since, while writing in my office, I heard behind me, the sound of a light, quick, foot-fall. Looking round, I was most agreeably startled at seeing *Hall*. His comely person attired after the neatest summer fashion of a sailor, and his handsome face wreathed in smiles; his eye, now clear and of the brightest blue, sparkling with intelligence, good humor, and perfect health. What a change had come over him! "But yesterday," and he lay at my feet, a crushed and bleeding worm, weltering on the very brink of the grave! Now, he stood before me, erect and sturdy,—as fine a specimen of human organization as the eye of Canova might love to dwell upon. Such, at least, he seemed to my delighted vision.

Only thirty-two days had elapsed since he had received the injury; and he had called to inform me of his entire recovery; and enable me, on a final examination, to close my notes of his case. He bears but slight external traces of the injury: there is a slight displacement, downward, of the fractured spinous process, and inconsiderable thickening, and induration of the muscles and ligaments about the intervertebral articulation which had been so completely severed; but which, now, was to all appearance perfectly approximated, and firmly reunited. Pressure and percussion on the part gave no pain; and the natural power of slight flexion of the spine, in any direction was unimpaired. He had not, of course, yet tried his strength, by lifting, or other violent muscular efforts: and would, prudently, refrain from doing so, for some time to come.

I will not prolong this article by copying the mechanical *rationale*, to which I refer the peculiar form of the lesion, in this case, and which I have appended to my notes. It will naturally suggest itself to any one, who will reflect upon the position Hall occupied at the time of the accident, and the successive changes in that position—presenting different points of contact to the roof of the boat, as the body yielded to its pressure.

So important, do I consider it, to the interest of science, and to the honor and usefulness of the medical profession, that nothing should appear in their annals, as *facts*, which are, merely, believed by those who furnish them; but such only as are fully established; and so extraordinary do I consider this case, that had I been alone in my observations of it, I would not furnish this report, however strict its fidelity to my own impressions. Under circumstances so verging on the marvellous, I would suppress my own unaided conclusions, remain silent, rather than risk, from those who do not know me, the uncharitable imputation of unfaithfulness, or the juster distrust of those who, from a wise and salutary caution, ever question the sufficiency of one witness, whoever he may be, to substantiate an extraordinary occurrence. Sustained, however, as I am, in this case; corroborated as are my views, by those of two other physicians of science and high respectability—one of whom is a practitioner of mature age, enlarged observation, and great experience, I feel warranted in making public that which, to my mind, is as well established as any fact, of the kind, can be by evidence, short of that furnished by dissection.

Memphis, Tenn., June, 1841.

We have read the foregoing account of Hall's case, by Dr. Borland, and find it substantially accordant with our own impressions.

W. CHRISTIAN, M. D.
J. R. CHRISTIAN, M. D.

Memphis, July 29, 1841.

P. S.—I learn from Dr. J. R. Christian, who has seen the patient several weeks since my last examination, that there is more deformity than I have reported—that there is now considerable backward curvature. This has occurred since I examined the case; and is, doubtless, the result of the upright position, and muscular exertions, which have been too constantly maintained, or sought to be maintained, before the ligaments and muscles had entirely recovered their strength. I cautioned the patient against it. S. B.

ART. III.—*Cases of Scrofula cured by the Xanthoxylum Fraxineum.**

Physicians, I believe, agree, that many of their most valuable remedies were discovered and first used by empirics; and hence the necessary conclusion that the use of a remedy by an empiric is only *prima facie* evidence against its efficiency. It is my wish to direct the attention of physicians to a remedy, which appears to have been used by quacks, with at least apparent success, in one of those diseases which appear to be mingled with the springs of life so perfectly, that palliation is attempted rather than relief. I refer to a shrub, the botanical name of which I do not know. I have heard it called Prickly Ash, Prickly Sumach,† and Tear-blanket. It is very common here in the West, and I believe generally known by one of these names. The case in which this remedy was first used within my knowledge, was that of a negro-woman of mine, some fifty years of age. She had been under the care of a physician for some months, without having derived the

*For this communication we are indebted to an unprofessional gentleman in Mississippi of great respectability and intelligence. Full reliance may be placed upon the accuracy of his statements.

†These are not the same plant. The Xanthoxylum Fraxineum is no doubt the one referred to. The Aralia Spinosa, (Prickly Sumach) we incline to think, possesses no medicinal properties. Y.

least benefit from the usual remedies. The ulcers about the throat had become very deep and large. She was very much emaciated. In short, the physician despaired of her wholly, and suggested the propriety of trying the Prickly Ash, saying that he had heard, when a boy, that it had been used successfully in that disease. He tried it, and in a short time all the urgent symptoms were relieved—the ulcers assumed a healthy appearance and healed up perfectly—the only application to them being a little tallow upon a rag. The disease appeared to have been perfectly eradicated in that case, there having been no symptom of its return during three years.

The next case that I saw was a man some 40 years of age —very spare habit. His family was scrofulous. His throat was much scarred when I saw him in 1840. He said, that for some years previous to 1828, he had been much afflicted with scrofula, not only with the ulceration about the jaws, but with violent pain in the chest, inflammation about the eyes; the water from his eyes was so acrid that it excoriated his cheeks. After having, as he expressed it, "spent all his earnings upon the Doctors without being benefitted at all," he, in 1828, applied to a negro-doctor, who gave him the Prickly Ash; he was entirely cured and remained free from scrofula until his death, last spring.

The next case that I saw, was that of a young lady who had had the advice of the most eminent of our Western physicians; indeed, she had been under the care of one of the most eminent for some years, with scarce even a temporary relief. She had entirely despaired of recovery. I recommended the Prickly Ash; in a few weeks all the swelling about the fauces subsided, the gums and cheeks assumed a healthy hue: she was relieved from the violent headachs to which she had been subject for years. She left the country before her cure was completed, and I understand that some of the symptoms have since returned.

I have been thus particular in describing the cases, in order that those who have better opportunities of forming a correct opinion, may decide as to whether there be any hope that this may prove a specific in this horrible disease.

I take a handful of the bark of the stem or root, and boil it in a *new* iron vessel. I let it stand until the iron has blackened the tea. I give it thrice daily—let the patient take as much as the stomach will bear without nausea. A little rhubarb may occasionally be necessary.

I hope that my experience may induce some of the profession to try the remedy. I would suggest the propriety of making an inspissated preparation of the tea after the iron has combined with it, for patients complain very much of the bitter nauseous taste of the tea. P. H. S.

September, 1841.

ART. IV.—*History of a Case of long standing Spinal Irritation, successfully treated.* By JOHN DAWSON, Jr., of Jamestown, Ohio.

Since Teale published his work referring all nervous diseases to irritation of the nervous centres and ganglia of the sympathetic nerve, the profession has had its attention turned towards these localities as very prolific sources of disease. Charmed with the claims of the work, and the light it shed upon a class of diseases imperfectly understood, we naturally ran off on the hobby. Now, however, the medical mind is about becoming balanced again; and although we find a great majority of nervous affections generated and sustained by irritation of the nervous centres, others, it must be confessed, are supported by no such pathological condition.

Conceiving that well marked cases of spinal and ganglionic irritation are entitled to a passing notice, I give you a few notes on one of several which came under my observation.

The case referred to is that of Mr. J. F., 45 years of age. The history he gave me of his case was, that about 8 years ago he suffered from pain in the lumbar region; had also indigestion. These continued with intervals up to September, 1839, at which time I was called to prescribe.

Symptoms.—Many of these were anomalous and cannot be described. The patient would frequently say that his feelings were so miserable and so singular that he could not describe them. He was, nevertheless, a very intelligent farmer. Obvious enough, however, were others. Deep-seated pain in the spinal column, increased by pressure. This developed itself first in the lumbar region, then in the back, and lastly in the neck. Whilst confined to the lumbar region he was afflicted with drawing tingling sensations along the course of the nerves of the inferior extremities, which could be increased at any time by pressure at the origin of these nerves. When the pain occupied the dorsal part of the column the pain was less violent. The patient then complained of difficult breathing, tightness of the epigastrium, and the sensation of a cord being tied around the waist. Occasionally he suffered from spasms and tremors of the arms, which, with the hands, he generally kept in a painfully flexed condition. The distress in the cervical region was violent, and it multiplied greatly the previous symptoms. The head now became the seat of "roaring wind" sensations, cephalalgia, fulness alternating with unnatural emptiness of the encephalon, and a sharp irritableness of the intellectual faculties.

Together with the proper cervical nerves he now evidently suffered from disease of the eighth pair and sympathetic ganglia. Evidence conclusive of this existed in the fact, that the involuntary muscles, the heart, diaphragm, stomach, intestines, and trunks of large arteries, became perverted in their functions, as must necessarily have been the case when the nerves appropriated to these organs become in any manner affected. The heart was so much disturbed in its functions that at one time I supposed it to be organically diseased. Irregular and spasmodic contractions were of every day occurrence. Equally distressed were the thoracic viscera. It seemed here to simulate the *dry asthma* of old writers, producing a sense of smothering and great pulmonary oppression. Seated in the stomach was a sense of distension alternating with emptiness and hunger, when the patient would be compelled

to eat. Very often the stomach secreted quantities of a viscid transparent liquid constituting what is called pyrosis. Perverted function, both in the large and small intestines, tended to produce successively, constipation, diarrhœa, and the secretion of gaseous exhalations.

The above is an outline, and but an outline, of the symptoms presented in this case of disease.

Treatment.—This, from beginning to end, occupied a period of nearly eighteen months. When first called, the first passages were emptied, and recourse had to anti-spasmodics, and medicines calculated to improve the perverted condition of the secretions. Failing entirely to accomplish any thing, attention was now directed to the spine. This consisted successively of all the modes of counter-irritation. We commenced by cupping and blistering; tartar-emetic ointment was then used to produce three or four crops of pustules. These produced in their turn, a mitigation of suffering, but were, on account of inconvenience, abandoned for the use of seatons. Palliatives, anodynes, and anti-spasmodics, were used to allay emergent suffering throughout the whole course of the treatment.

Reflection on this case proves—

1st. That a great variety of symptoms may be produced by a single disease.

2nd. That irritation of the sympathetic nerve, co-operating with a similar affection of the spinal nerves, multiplies in an eminent degree the symptoms, and embarrasses the cure.

3rd. The great indication to be fulfilled, is counter-irritation over the seat of the disorder.

4th. The length of time required to cure is sometimes very great, this patient having been eighteen months under medical treatment.

February, 1841.

ART. V.—*Ice in Cholera Infantum.* By Dr. W. S. LAWRIE, of New Concord, Ky.

In the last number of the Journal I observe a recommendation of *ice* in cholera infantum. It is the first and only instance in which I have seen this article publicly recommended in this truly formidable disease. My attention was directed to its employment while under the tuition of Dr. Jackson, of Jackson, Tenn. In my own practice, it has been uniformly exhibited, when practicable to obtain it; and though my professional experience is limited, in all obstinate cases of this disease, I have not failed to prescribe it with most decided benefit. In the article in the Journal it is stated, that the most disagreeable retching, always troublesome, was almost instantly relieved by administering ice. From personal experience, I am able fully to confirm this affirmation; and I have frequently found, that while almost every thing else exhibited, and particularly in liquid form, was at once ejected, the ice, freely given, seemed to possess the power of allaying the excessive irritability of the stomach, and of alleviating the sufferings of the patient.

Another article from which, in conjunction with ice, much benefit may be derived in cholera infantum, is good port wine. In addition to what ice the child will eat, I am in the habit of using the wine made into sangaree, *freely iced*, giving such quantity as it may be induced to take.

September, 1841.

Bibliographical Notices.

Art. I.—*A Treatise on the Cause of the Disease called by the People Milk Sickness; as it occurs in the Western and Southern States.* By John Simpson Seaton, M. D., of Jefferson County, Ky. Louisville: pp. 49.

In this little work Dr. Seaton has sought to establish the theory, that Trembles and Milk Sickness are caused by arsenic, or, rather, some of its preparations, dissolved in spring-water. His arguments may be reduced to two. 1st. The prevalence of the disease in certain parts of the state of Indiana, where nodules of iron pyrites containing arsenic, are found; 2nd., the resemblance of the symptoms of Milk Sickness to those produced by poisoning with arsenic. Dr. S. has not shown, that the water of the springs where his observations were made, contains arsenic or any other poisonous impregnation; nor even that arsenical pyrites is found in all the localities in which the Milk Sickness occurs. Nor has he traced out an analogy between the symptoms of Milk Sickness, and those from poisoning by other substances, as the preparations of barytes, zinc, copper and lead.

We admit that Milk Sickness *may* arise from arsenic, but such possibility, might be met, by alleging the possibility, that it *might* be produced by many other causes. A theory cannot be established without positive facts, but such facts our author has not yet adduced.

1st. The symptoms which characterize Trembles and Milk

Sickness do not bear a closer resemblance to those occasioned by arsenious acid, than they bear to the symptoms of poisoning by various corrosive, acrid, and narcotico-acrid substances—mineral and vegetable. Guided by the same analogy, those maladies have been ascribed to the salts of lead, and to mushrooms. The truth is, that when the stomach is the seat of a severe irritation, the symptoms which result from it, must necessarily be nearly the same, whatever may be the remote cause.

2nd. Dr. Seaton has found nodules of arsenical pyrites in certain slate and sandstone formations where the Trembles prevail. But in the state of Ohio, the *very same formations are entirely exempt from that disease.* This is the case, from Mount Vernon in the interior of the state, down to Portsmouth, at the juncture of the Scioto river with the Ohio. East of this line to the Muskingum, and beyond, there are coal, slate and sandstone strata, to the exclusion of almost every other rock, but Trembles and Milk Sickness are unknown.

3rd. Our author seems to admit, that the limestone formations are free from arsenical nodules, and affirms that they are equally exempt from those diseases. The former may be true—*the latter is at direct variance with fact.* Those maladies prevail in the valleys of the Kentucky and Licking rivers, in this state; in the valley of White Water, Indiana; and in those of the Great and Little Miamies, and all the western tributaries of the Scioto, in the state of Ohio, though no rock but limestone is found in all those districts.

4th. In this Journal, for March, 1841, we have shown on the highest possible authority, that in certain parts of Ohio, the cultivation of the soil prevents the further occurrence of those diseases, although the water of the springs and ponds of course remains unchanged, as it respects a mineral poison.

5th. We have, also, shown in the same paper, that while the geological constitution of adjoining portions of the district in which our observations were made, is the same, those tracts only, which are level and covered with heavy oak timber, are liable to Trembles and Milk Sickness.

6th. In the same paper, we recorded as an indubitable fact, that of a herd of cattle, a part of which were pastured on a meadow, and part in an adjoining woodland, *while the whole were watered from a common well*, the former remained free from Trembles, but many of the latter died of that disease.

7th. In all parts of the West, where Trembles has prevailed, the disease has constantly diminished with the clearing and cultivation of the country; an effect which could not occur, if it depended on mineral impregnation of the water.

These facts in the absence of *all* positive evidence in favor of the arsenical hypothesis, requires us to reject it till further proof is adduced. Such proof Dr. S. expects to develope by a course of experiments, and we hope that he will make them. That he can destroy both health and life, in man and beast, by the administration of arsenious acid, is quite certain. That the stomach will be the chief seat of the morbid action, is equally certain. But would the disease thus induced, be, *of course*, identical with Milk Sickness and Trembles? We think not. It *might* be, and it might *not*. To settle the identity, several things must be established. *First.*—The symptoms must be the same, in the *particular*, not in the *general*. *Second.*—The morbid appearances after death must be the same. *Third.*—The quantity administered, in a given time, must equal what the animal would take by drinking the water of a spring impregnated with the poison. *Fourth.*—The milk of a cow taking the poison, must produce Trembles in her calf and Milk Sickness in those who drink it. *Fifth.*—The flesh of animals dying under experiment with the Trembles, must, when eaten by dogs, raise the same disease in them. *Lastly.*—A preparation of arsenic must be detected in the water of a spring, which was used by animals before being attacked by the Trembles, and which were so confined that other causes could not have acted then. These various points being settled affirmatively, the arsenical theory would be established. The spring whose waters, as ascertained by the proper tests, are impregnated with salts of arsenic, would then be avoided, and the disease disappear. This avoidance

is all that would result from the discovery, for springs thus empoisoned, could neither be made pure nor their deleterious properties neutralized.

But would not the same remark apply to all the remote causes which have yet been proposed? Undoubtedly. Suppose it should be discovered, that the disease arises from malaria—how could it be prevented, any more than we can prevent bilious fever? Should it be found to arise from mineral exhalations—how could they be arrested? Should a forest-plant be convicted of the mischief—how could it be eradicated, without destroying its associates by the axe and the plough? We cannot but regard the search after the special cause of Trembles and Milk Sickness as promising very little of real utility. The ascertainment of the infested localities should be our great aim. They might then be avoided, or have their surface transformed by the hand of art. In the state of Ohio, the latter has been found infallible; and we know of no fact going to prove that the same process would not be effectual every where.

We cannot refrain from saying that an undue degree of importance has been attached to the disease or diseases we are now considering. The mortality from them is very small, compared with that from many other maladies about the causes of which we make but few inquiries. There can be no doubt that more persons, annually, die in the West, from autumnal fever, than have died of Milk Sickness, from the commencement of its settlement. Even in the districts where the disease is endemic, it does not destroy as many as pleurisy or cholera morbus.

In conclusion we ought to observe, that there are physicians who deny that the disease called Milk Sickness, is a specific malady; and insist that it is nothing more than autumnal fever of a congestive type, attended with great irritability of the stomach. D.

ART. II.—*Physiology and Animal Mechanism.* Philadelphia: 1841: pp. 101.

We have received from the publishers, Turner & Fisher, Philadelphia, a small volume entitled "Physiology and Animal Mechanism," designed for the use of schools and colleges. It is a translation from the French of Milne Edwards and Achille Compte, by Dr. Ruschenberger of the U. S. Navy. We have looked over this little work, and cannot but regard it as preferable to several which have been put forth on the subject of which it treats. From the number of these elementary books, which have been published within the last twelve or fifteen years, it might be supposed that the demand for them has been very great; but such we fear is not the fact. Each has been, to a certain extent, a failure, and its successor has been offered as a work entitled to greater patronage. That none of them have been liberally patronized, is not, perhaps, owing to their defects, so much as the difficulty of introducing a new study into our academies; especially when it presents no *prima facie* claims to utility, in the vulgar acceptation of that term.

We think the medical profession deeply interested in the popular study of physiology; and that they ought, in every way that is practicable, to promote a taste in the people, for this branch of science. Nothing would so effectually repress the encouragement of quackery, and inspire confidence in the medical profession, as a knowledge of physiology.

To this end we recommend Dr. Ruschenberger's little work, in which all the great functions of digestion, respiration, circulation, sensation and locomotion will be found familiarly explained. It is illustrated with plates; but they are on too small a scale, and withal are executed in a rude and imperfect style. This was a great mistake in the publishers; who ought to have known, that in this, as in the study of zoology and geography, more depends on the graphical delineations than on the text. D.

ART. III.—*Bulletin of the Proceedings of the National Institution for the promotion of Science.* Established at Washington in 1840: pp. 65.

This pamphlet, No. 1 of Vol. 1, contains the proceedings of a society for the first nine months of its existence, organized in Washington City on the 15th of May, 1840. Its object is the promotion of "every branch of knowledge." Its members are divided into eight scientific classes, namely: Astronomy, Geography and Natural Philosophy; Natural History; Geology and Mineralogy; Chemistry; the Application of Science to the Useful Arts; Agriculture; American History and Antiquities; and Literature and the Arts. Two other classes should and no doubt will be established, Botany and Vegetable Physiology; and Comparative Anatomy, Physiology and Medicine.

Among the officers of this Institution we observe gentlemen of high literary and official distinction, such as the Hon. John Q. Adams, the late Gen. M'Comb, Hon. Joel R. Poinsett, Col. Joseph G. Tolten and others, of different political parties or of no political party, and others, as Dr. Thomas P. Jones, of celebrity in science.

The Institution seems to have been peculiarly active and energetic in the beginning of its labors; having held frequent meetings, and opened an extensive correspondence with men of science, and associations of the learned, both in Europe and the United States. It has also commenced the formation of a cabinet and library, intended to embrace specimens and books, illustrative of every branch of human knowledge. Among the early contributors to both, we notice the names of several distinguished physicians.

The founders of the Institution may reasonably expect two important aids from the General Government—first, the collections made by the Exploring Expedition; and second, the Smithsonian legacy. With these acquisitions, an Institution might be built up in the Capital, that would be truly and honorably national. D.

Selections from American and Foreign Journals.

Effect of Belladonna upon an Irritable Eye.—A female of highly nervous temperament, who had been blind from cataract, and had been the subject of several operations for its cure, applied for advice for a diseased condition of the left eye, which followed the removal of cataract, and formed a serious obstacle to vision. The operation, which was performed upon this eye more than a year since by myself, had been followed by a severe and protracted attack of rheumatic ophthalmia, which resulted in a thickening of a portion of the capsule of the lens which had not been absorbed, and an adhesion to it of the papillary margin of the iris, forming an enlarged and irregular pupil. The lens was probably entirely absorbed, and the thickened capsule was perforated by two orifices, one toward the inner and the other toward the outer canthus, through which the patient could see by directing the eye outward or inward, although she was unable to distinguish objects directly in front of her. In the right eye the iris was moveable, the pupil clear with the exception of a minute portion of the lens which appeared in front, and the sight good, the patient being able to read large print without difficulty. Previous to a critical examination of the eyes, I directed (as is usual) the application of ext. of belladonna to the lids at bed-time, intending to inspect them in the morning of the following day. At this time I found the pupil of the right eye (which was the better of the two) largely dilated, but the patient was complaining that her sight was much worse since the application. She was troubled with muscæ volitantes, and other illusive appearances indicative of partial amaurosis; I trusted that these symptoms would disappear, as the effect of the belladonna went off, but they have continued more or less to the present time, a period of several months, much to

the annoyance of the patient, who complains bitterly of the change effected in her sight since this application.

The danger of the free application of belladonna or stramonium in cases where there is the least tendency to amaurosis, has been suggested by some authors; while by others, amongst whom is Lawrence, such fears have been considered groundless. The case cited is the only one in which I have remarked any strikingly injurious effects from it, after having seen it used freely and extensively prior to the operation for cataract. That the powerful atonic effect which this article is capable of producing should, however, promote the tendency to amaurosis, where it exists, appears reasonable, and should induce caution in its use where we have doubts as to the soundness of the retina.—*Amer. Jour. Med. Sci. Oct.* 1841.

Ergot.—Mr. Wright inclines to the opinion which ascribes the formation of the excrescence to the combined influence of atmospheric warmth, and moisture. He is the more inclined to this belief, from the circumstance of the ergot being much more common in the district of Sologne than elsewhere, this district being possessed of those properties which favor such a conclusion, viz. moist rich soil, atmospheric warmth, and sheltered situation. Grains also occur only half of which are ergotted, the other half being healthy; an insuperable objection to the opinion, that ergot is produced by the growth of a fungus, which would equally attack all parts of the grain. Besides, from his own experiments, he found that ergot in powder or substance, sowed with rye, failed to produce the disease on the growing plant, nor did it even succeed, when he watered freely and daily, the growing plants with water, in which ergot had been steeped. The application of the powder of ergot to the growing ears of rye, likewise failed to produce ergotted grains. The excrescences remarked at the upper extremity of the grains he regarded as the stigmata altered by disease. Mr. Wright's conclusions were further confirmed by the fact of his discovery, that ergot contained a considerable quantity of fecula, 26 per cent., a substance which could not have been expected, if the disease were produced by a fungus, and which Mr. Wright has the merit of discovering, no previous analyist of the substance making mention of it.—*Edinburgh Med. and Surg. Jour., Jan.* 1841; *Amer. Jour. Med. Sci.*

Formulæ used in the Treatment of Tinea Capitis.—The following are the formulæ commonly employed by M. Casenave in the treatment of this disease at the hospital of St. Louis:

Ioduret of Sulphur Ointment—Ioduret of sulphur, 1 scruple; lard, 30 scruples.

Depilatory Ointment—Subcarbonate of soda, 8 scruples; lime, 4 scruples; lard, 30 scruples.

Pitch Ointment—Citrine ointment, 15 scruples; pitch ointment, 30 scruples—Or, powdered pepper, 2 to 4 scruples; lard, 30 scruples.

The ointment is applied every evening; in the morning the head is washed with the following lotion:—Subcarbonate of potash, 8 scruples; distilled water, 500 scruples.—*Prov. Med. and Surg. Jour.*, August 14, 1841, from *Jour de Med. Pract.*, *Amer. Jour. Med. Sci.*

New Method of Applying Iodine for the Cure of Phthisis Pulmonalis.—The following is Mr. Leigh's method of using iodine. He directs the patient to apply a sufficient quantity of iodine ointment on the ribs, under both axillæ, and to cover the head with the bedclothes, to breathe iodine volatilized by the heat of the axillæ. The ointment produces counter-irritation on the skin where it is applied, and is to be repeated according to circumstances. This method, he says, has appeared to him to arrest the progress of phthisis.—*London Med. Gaz.*, May, 1841. *Ibid.*

Inhalation of Conium and Iodine in Tubercular Phthisis Pulmonalis.—Sir Charles Scudamore, in a paper in the *London Med. Gazette*, Feb. 7, 1840, states that he has tried the following method of inhalation in phthisis and bronchitis, sufficiently to enable him to recommend it very strongly to the profession. He denies that the inhalation of conium and iodine in either of the above named diseases irritates the lungs;

on the other hand, he says that the patient looks forward with pleasure to the time when the process is to be repeated. He disagrees with Laennec in some points, and thinks that the *early* stages of phthisis may be cured by this mode of treatment, and goes on to relate cases where a cavity was clearly indicated, and where pectoriloquism was most evident, and yet the patient recovered by means of inhalation. Indeed some of his cases were so clearly cases of incipient phthisis, according to his description, that we cannot help placing dependence upon his treatment in some measure, however contrary to the common feelings of the profession. Some, indeed, relapsed and eventually died after an interval of some years; others have not hitherto relapsed, and are yet in perfect health. The author then goes on to relate his method, and the ingredients of his mixture, combining, however, at the same time, other treatment of a general kind. He says—I cannot, I think, too often repeat, that while I claim for the inhalation so great a regard, I consider it to be only one part of the treatment required. The additional constitutional means embrace a very wide consideration. The local external treatment of the chest by proper means of counter-irritation, and by lotions and frictions, is a very important part of management.

I have never seen, from an active remedy, so large a proportion of benefit, with so small a proportion of disagreement and inconvenience, as from the inhalation of iodine and conium. The method also is to be considered; and I may here remark that many excellent remedies have fallen into odium and neglect, at different periods, from the error or abuse of their application. I am careful that all the ingredients which enter into the composition of the inhaling mixture are perfectly pure. I recommend the following formula. ℞.—Iodinii puri; iodid potassii, aa gr. vi; aquæ distillat. ℥v, ℥vi; alcoholis ʒii. M. fiat mistura, in inhalationem adhibenda.

I now always prefer to add the conium at the time of mixing the iodine solution with the water; and it should be a *saturated* tincture, prepared with the most genuine dried leaves. In the commencement of the treatment, I advise very small proportions of the iodine mixture; for example, only from half a drachm to a drachm for an inhaling of eight or ten minutes, to be repeated two or three times a day. Of the soothing tincture, I direct half a drachm—which I usually find sufficient; but it may be increased if the cough be very troublesome. I soon augment the quantity of the iodine, and progressively from ʒi to ʒiv; but also, then prolonging the

time of inhaling, I divide the iodine dose, putting two thirds at first, and the rest after the expiration of seven or eight minutes. If the temperature of the water be measured by the thermometer, it should be 120° Fahr. as being the most favorable for volatilizing the active principles of the iodine and conium, mixed with some watery vapour; but the approximation will be sufficient, if equal parts of boiling and cold water be used; with which the inhaler is not to be quite half filled. Invariably, however, care should be taken to prepare the bottle for this heat of water, by first washing it out with some tepid water.

During the process, the inhaler should be kept immersed in a jug, containing water of rather higher temperature than 120°.

It is of the utmost importance that the strength of the inhaling mixture should be considered in relation to the particular case. The feelings of the patient will be a great guidance; he should have the sense of relief, and not of inconvenient irritation, produced. The cough arising occasionally during the process is not an objection; but if it be more irritable afterwards, it shows that it has been used too strong. There is a certain stage of the tubercular disease, when overexcitement, from employing the iodine in too great quantity, might hurry on the softening process too quickly. It is here that the treatment demands the greatest judgment. In every case one of the following events may be expected to happen; either that the tubercular irritation will be arrested and gradually removed, be arrested and suspended, but not cured, or pass on to the softening process, which terminates in the production of an excavation. In all these different states of disease, I advise the inhaling treatment to be employed.

It is my belief that this direct and very accurate mode of applying this powerful medicine, iodine with conium, induces a new action in the vessels and nerves of the lungs, which is calculated to supercede the diseased action. I also assign much effect to the stimulation of the absorbents, and have been led to believe that tubercles have in this manner been actually removed.

With a well constructed glass inhaler I find all the satisfaction I can desire. The bottle should be large, and the tubes capacious. The one issuing from the bottles should be upright, passing off in a gradual slight curve, so that the vapour shall not be much cooled in the course of its progress; the ingress tube should dip very near to the bottom of the bottle, that all the air so introduced may receive impregnation. The

patient must be desired to inhale by using at the same time suction and a pretty full inspiration, then to drop the under lip from the mouth-piece and make a free expiration; so conducting the process by pausing, and, if he like, little suspensions, in order that he may not experience any of the fatigue which would certainly happen if breathing quickly, or using an inhaler with small tubes, or with too much water in the bottle.—*Braithwaite's Retrospect*, from *Lond. Med. Gaz.*, Feb. 1840; *Ibid.*

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*Magendie's Method of treating Neuralgia.**—The remedy, *par excellence*, recommended by M. Magendie in the treatment of obstinate neuralgia of the face and other parts, is electro-acupuncture. The needles should be made of an unoxydisable metal, and therefore those of platina are to be preferred. With respect to the mode of introducing them, it is better to push them at once, and with a sort of plunge, than to endeavor to drill them more slowly. In most cases two needles are quite sufficient; one near the origin of the nerve, and the other near its termination or expansion. The former is then to be connected with the positive wire, and the latter with the negative wire of a galvanic apparatus. The patients usually describe the sensations experienced as if a spark or stream of lightning passed instantaneously along all the divisions of the nerve: at the same time the muscles of the part are thrown into contractions. The application is not to be continued beyond a few cases, except in some severe cases, in which a continued stream must be maintained for some time. M. Magendie gives the preference to Clarke's electro-magnetic machine, as being altogether more convenient than any other for the purpose of electro-acupuncture.

If the neuralgic pain leaves one branch of a nerve to fix itself upon another branch, or upon another nerve, one or both needles are to be withdrawn, and should be inserted along the course of the nerve newly affected.

Several cases of supra-orbital neuralgia are adduced, in which the employment of electro-acupuncture speedily dispelled all suffering. The following one, in which the superior maxillary branch of the fifth pair was the affected nerve, may deserve to be noticed.

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*Medico-Chirurgical Review, July, 1841, p. 202.

M. Thelin had been subject to frequent attacks of most severe neuralgia, affecting the superior maxillary nerve of the left side, when he first consulted M. Gagendie. The pain in the gums, lips, cheek, and ala nasi, were insupportable; the patient could scarcely utter a word, and as for mastication, that was impossible. All methods of treatment had been tried, and all tried in vain. What with having many of his teeth extracted, and being leeched and blistered, and physicked for months and months at a time, his constitution had suffered severely. He consulted M. Magendie on the 5th of March, 1838; at one sitting of a few minutes the pain was *chasse*. Since that period, whenever the neuralgia returned, he repaired to M. Magendie, and always left him cured of his sufferings. It is now several months since he has had an attack.

In the second volume of our author's lectures on the nervous system, he has related two cases of severe neuralgia affecting the tongue; in one of which the disease had lasted for four, and in the other, for one year. . . . . "A very fine platina needle was inserted into the trunk of the facial nerve, where it enters the parotid gland, and another was inserted into the affected side of the tongue. In this manner I was sure to act on the seventh and fifth pairs of nerves, since I punctured the trunk of the first and the lingual branch of the second. The needles were then connected with the wires of Clarke's machine. In one of the patients the pain in the tongue immediately ceased, but it fixed itself on the mental branch of the inferior maxillary nerve. The needle was forthwith withdrawn from the tongue, and inserted over the *foramen mentale*. The pain was driven from this point, but it was almost immediately transferred to the infra-orbital nerve. The needle was, therefore, introduced over the aperture from which it escapes. The enemy was thus pursued from one point to another, and ultimately was expelled before the patient left my house. In the other case, the pain, when driven from the tongue, took refuge in the sub-orbital nerve; driven from this, it returned to the tongue, whence it was again dislodged. Ultimately the patient was quite cured."

Certainly such practice is infinitely superior to that of attempting to divide each nerve, that becomes successively affected, as practised, for example, by M. Roux in a recent case, where he divided first the mental branch of the inferior max illary, then the lingual, and, lastly, the sub-orbital nerve—the enemy, however, retreated to the ethmoidal, where the knife of the surgeon could not reach him.

"In such a case," says M. Magendie, "I pursue the pain, not with the bistoury, but with the galvanic current. Even should it fix itself upon the ethmoidal nerve, I should insert one needle into the nostril, and another into the orbit, along the upper part of its internal wall, at the place where the external nasal traverses it, thus attacking it both near its origin and its termination."—*Gazette Medicale.*

Remark.—We have no doubt that electro-acupuncture will relieve the suffering in many cases of neuralgia which are unconnected with structural disease of any part; but it is more than probable that the relief will be only temporary, unless appropriate constitutional means are employed at the same time.—*Rev.*

On the Use of Ergot. By George Fife, M. D.—Having long been convinced of the value of the ergot of rye as a medicine, I now beg to offer the following remarks to my professional brethren; premising, that what I am about to advance is not the offspring of any fanciful notions as to its *possible* effects, but a simple statement of the results by which its use has been followed in my practice for several years. This assurance seems to be especially necessary at the present time, when it is but too much the fashion to render facts subservient to hypotheses. Whatever, then, may be advanced in this communication has been actually observed: and I am perfectly satisfied (due discrimination being exercised) will be fully sanctioned by further experience.

To enter upon the consideration of the action of the ergot on the parturient uterus, or the very interesting and important question of its power to excite uterine action, is foreign to my present object; I shall therefore proceed at once to a statement of its efficacy as a medicine, and the diseases in which I deem it worthy of confidence.—They are—polypus uteri, attended with profuse hemorrhage; menorrhagia, where there is no inordinate action of the heart or arteries, or morbid sensibility of the uterine system; in leucorrhœa, when independent of inflammatory action; in chlorosis with amenorrhœa; and in dysmenorrhœa: in all of which cases I have had numerous opportunities of ascertaining its efficiency.

The first time I saw it exhibited as a medicine was by my

lamented friend, the late Mr. Parr, of this town, so long ago as the year 1828. It was in a case of very large polypus of the uterus, accompanied with frequent and frightful attacks of hæmorrhage. He gave the ergot after all ordinary treatment had proved unavailing. The effect produced was not only the moderation of the hæmorrhage, but also the expulsion of large and numerous masses of the tumour, in many of which a distinct fibrous structure was perceptible. After its continued employment, the woman, who had arrived at the climacteric period, enjoyed comparative health and comfort, being freed from the repeated and alarming hæmorrhages, and experiencing no inconvenience from the small portion of the tumour which, when last examined, still remained. To this case I owe the idea that it might possibly be useful in others. How far this has been justified, the sequel must decide.

In menorrhagia, by which term I do not mean the mere increased menstrual discharge, I have found this medicine of the greatest value. In this disease, however, it is necessary to ponder well on the individual circumstances of each case, and to use the utmost caution in ascertaining the cause on which the disease depends; as where such precaution has been neglected, it has been my lot to see both the sufferings and danger aggravated by the ergot. In this respect it does not differ from other active medicines. The slightest reflection will suffice to call to mind the very different states of the system in which this disease occurs. It may, for example, happen in the most phlogistic and plethoric, or it may arise in a person of a diametrically opposite constitution. If given in the first state it is decidedly prejudicial, unless preceded by such means as are calculated to remove alike the plethora and morbid sensibility; and even when this has been done, its operation requires to be carefully observed. In the last it acts more beneficially, as it at once raises the nervous energy of the uterus, and through this medium probably imparts increased tone to the relaxed and debilitated vessels from which the exhalation takes place. The following case affords a striking example of the utility of the medicine:

In 1834 I was requested to visit a poor woman who had for many years led a most abandoned life, and who was apparently in a dying state from extreme exhaustion. Her age might be about thirty-four. On inquiry, I learnt that for the two preceding years she had suffered from repeated and severe hæmorrhages from the uterus, and that, on the present occasion, the discharge had continued for many days, until, when I saw her, though still abundant in quantity, it was not

more colored than the serum of healthy blood. In short, she seemed to be rapidly sinking. I ordered her immediately a full dose of the acetate of lead, with opium, to be repeated every four hours; and port-wine or brandy, in sago, to be given frequently. Cold was applied, both externally and internally, by means of an injection of a strong solution of alum. For a brief space of time she appeared somewhat relieved; but in two or three days the hæmorrhage recurred with increased violence, the fluid also being more sanguineous. Having in other cases, fancied that the ergot had been of use, I immediately gave her ʒss. of the powder, to be repeated in ℈i. doses every three or four hours. From the lapse of an hour after the first dose she experienced manifest relief; and on seeing her in the evening, I directed the third dose not to be given till the sixth hour, unless any recurrence of the discharge should render it necessary. Next day she continued better; and the medicine was directed to be taken only night and morning. From this visit she went on gradually improving; and for two years after, when I had occasion to prescribe for her, she had experienced no return of hæmorrhage. She appeared quite well in health, but completely blanched in colour. To this I might add several other cases, occurring in persons of asthenic constitution, in which similar good effects were derived from the ergot, but consider that it would only be a needless occupation of your columns, and your readers' time. It may be enough to say, that seven years of subsequent practice have confirmed my reliance on the ergot in such cases. Even where an opposite diathesis prevails it has been employed advantageously, combined with conium and hyoscyamus. In such persons it is advisable to premise a moderate abstraction of blood from the system, and to keep up a depletory action by means of saline cathartics. In these cases, however, the infusion of roses with sulphuric acid and digitalis, or alum, seem more appropriate.

In leucorrhœa it has been highly useful. In this disease, as in menorrhagia, it is necessary to ascertain the state of the system, more particularly the uterine disorder on which it depends; as where any degree of inflammation is present it will be injurious. In several distressing cases of this disease, where the strongest astringent injections had been employed without any effect, except exciting inflammatory action which did not previously exist, I have found the ergot, aided by injection of simple warm water, or the decoction of poppy capsules, perfectly successful. I may observe *en passant* that from considerable opportunities of observation, it is my firm belief

that in a vast proportion of cases of lucorrhœa, stimulant and astringent injections are not only uncalled for, but absolutely contra-indicted; at the same time, it must be acknowledged, that they are occasionally of great use.

In chlorosis and amenorrhœa I have frequently experienced the good effects of the ergot, after aloes, iron, valerian, cantharides, &c., had all been employed without the slightest advantage. In these cases, when extreme nervous susceptibility exists, it may be most advantageously combined with the valerian, and where the alvine system is torpid, with aloes. When aloes are employed, I attach the preference to the Barbadoes: in doing so I may be somewhat empirical, as it is difficult to account for the superiority of the Barbadoes over the socotrine, as an emenagogue, unless it be ascribed to the larger quantity of bitter principle contained in the former.

In dysmenorrhœa the ergot has been most useful. In one case, accompanied with what may without exaggeration be termed torture at each period, it appeared almost magical in its operation. It is right to state that it was given in combination with the valerian; which medicine, however, had been previously given, but without any apparent benefit. To enter into the detail of individual cases is not only tedious, but would also occupy too much of your valuable columns. I shall therefore endeavor, with the utmost possible brevity, to explain the apparent paradox of a medicine being of use in cases at first sight so pathologically opposite.

It is well known that the same cause operating on different constitutions will be followed by effects proportionately variable. This is a fact which does not admit of refutation, whether it be applied to a man morally or physically. So then it is with regard to the uterine system, as every man of moderate experience will admit that the same morbid condition will, according to peculiarity of constitution, produce a very dissimilar train of symptoms. Thus, whilst a congested state of the uterine vessels will in one person lead to menorrhagia, the same cause operating on a different constitution will be attended with leucorrhœa. Again, when the nervous system of the uterus is at fault, we in one person have chorea, in another simple hysteria, in others cardiac and pulmonic symptoms, &c. &c. This is especially true in regard to menorrhagia and leucorrhœa. These diseases may arise alike in the sthenic and asthenic diatheses, which must of course render a corresponding modification of our remedial measures necessary. Without using much discrimination, we aggravate rather than alleviate the suffering inseparable from disease, and enrol ourselves under the banner of empiricism.

I have merely to add, that I consider myself fully justified in recommending the ergot as an excellent emenagogue and anti-hæmorrhagic agent. Should this recommendation be followed by beneficial results in the hands of other professional men, I will regard myself as amply rewarded for the trouble of putting together the foregoing remarks, the correctness of which can only be proved by trials more extensive than private practice; besides which, every man is liable to view with *partiality* any plan of treatment, which, without authority, he adopts and finds successful.

P. S. The doses in which I have prescribed it, have varied from gr. x. to ℈i. of the powder, ℥ss. to ℥i. of the concentrated tincture. A good formula for decoction is given in Foot's Medical Almanack, although it appears to me that the quantity of ergot is rather small.

My friend, Mr. Bennet of Gateshead, informs me that he has given the ergot in a case of hæmoptysis with very satisfactory results.—*Lon. Med. Gaz.*

Observations on Solar Asphyxia, Coup de Soleil or Sun-Stroke. By B. Dowler, M. D., of New Orleans.—In the numerous works written or re-published in the United States, I have not seen any satisfactory notice of this very frequent, and in the south, most fatal of all maladies. During five weeks, ending with last month, (July,) five fatal cases occurred in my practice alone.

The name I have chosen for the disease, (*Solar Asphxyia,*) being descriptive of its leading symptoms, will, I trust, receive the sanction of the profession and the public. I adopted it several years before I had an opportunity of testing by dissections, the character of the disease, which it so fully expresses. *Pulmonary apoplexy*, is a name, more characteristic of the morbid appearances of the lungs, but it makes no allusion to its solar origin, or to the symptoms of suffocation, which mark its progress.

Solar diseases require a particular arrangement or classification which is highly important in a practical point of view. I submit the following:—

I. *Solar exhaustion or syncope;*
II. *Solar or sun-pain;*

III. *Solar excitement or inflammation;*
IV. *Solar asphyxia;*

which we propose to make the principal subject of our investigation.

I. Solar exhaustion differs from solar asphyxia, both in symptoms and treatment. In solar asphyxia, the skin is extremely hot, and generally dry; there is a choking sensation and a total loss of sense.

In solar exhaustion, the skin is moist, pale and cool; the breathing is easy, though hurried; the pulse is small and soft; the vital forces fall into a temporary collapse, the senses remaining entire. Horizontal position, free air in the shade, external stimulants and frictions, are usually sufficient to restore the patient. Vomiting is very useful, and is easily excited, as there is usually nausea; warm water, and if necessary, a few grains of ipecac. may be given. Vomiting appears to throw the blood from the centre to the circumference. The pulse rises.

That fatal disease of northern summers, ascribed to drinking cold water, is probably, nothing but solar exhaustion, in which cold water has but a secondary agency. It happens only in very hot weather.

II. Solar, or as it is commonly called by the people, sun-pain, is a chronic disease in which the abdominal organs are more or less deranged, though the most remarkable symptom is a pain in the head, while the sun is above the horizon.

III. Solar excitement or inflammatory re-action, sometimes follows solar asphyxia of the second degree, being attended with febrile heats, arterial throbbings and headaches.

Case.—A cooper while working in the sun, fell so suddenly as to bruise and lame himself considerably. He soon got up; but feeling feverish, and having pulsations in the head, for several days he tried the Thompsonian treatment without benefit. He called on me for advice. He was bled freely, which caused a long continued syncope, from which he arose cured. He took no medicine and went to work the next day.

J. E. had been to the town of Bath, six miles distant, on the 4th day of August, 1837, in company with Dr. R. and another person; while attempting to walk back to New Orleans, upon the rails of the Nashville rail-road, not then finished, the doctor fell sun-struck, and expired in a few minutes. The body was abandoned. The other companion of E. had not walked far, when he too fell, and died in like manner. The next morning as E. was passing opposite my door,

on the sunny side of the street, he fell. I instantly bled him, upon the pavement. The blood trickled slowly at first, but soon after flowed in a good stream, and the pulse, though feeble, became fuller during the operation. In a few minutes, the man walked to his boarding-house, without feeling any unpleasant symptoms; but a moderate re-action coming on during the day, cathartics were given, and by the following day, his health was restored. In this case, blood-letting was probably useful, but in nine cases out of ten, it is useless if not worse, accelerating the death from five to fifteen minutes. During the last five years, I have been called to see a very considerable number of sun-struck persons, within five or ten minutes after they fell in the streets: formerly, I used to bleed them, and though the great heat of the body is thereby suddenly diminished, the pulse becoming soft as air, yet by the time the arm is tied up, (which is done more for form than necessity,) the patient is choked suddenly, and to appearance, by a dense tenacious mucus, the breathing not ceasing gradually, as in other disease, but instantly the face turning livid, and even its veins, especially upon the forehead, becoming at the moment distended. Bleeding hastens the strangulation, though it is always desired by the friends.

Without anticipating the description of sun-stroke, to be found in the sequel, I may add another variety, a sub-acute affection, beginning with solar excitement and ending in asphyxia.

Case.—A gentleman who was not acclimated, exposed himself to the sun until noon, when he sent for a physician, who bled him most profusely, (two pounds,) gave him cathartics, applied mustard on the stomach and legs, cold to the head, &c. Afterwards he walked about for some time, but in the afternoon became insensible. About sun down I was called in, and found him asphyxiated, unable to swallow, totally insensible, breathing as in sun-stroke; pulse air-like and quick; the skin hot. He did not die until late in the night. This affection lasted about fifteen hours; more than fifteen times longer than the average duration of acute solar asphyxia, which has but one stage, as truly as hanging, drowning or suffocation from carbonic acid gas, with this difference, that in the former there is not a movement in any of the muscles, except those concerned in breathing and in circulating the blood, except immediately before or after the last breath, when there is sometimes, a very slight contraction of the fingers, and a kind of bending or turning of the body towards one side, though this is scarcely observable.

Solar exhaustion in its mildest and chronic form, that of debility, is a uniform effect of our hot season, until after acclimation. During this period, though the health may be good, the ability to perform the usual amount of labor is diminished. Even horses are debilitated, often get the *thumps*, and frequently die from solar asphyxia, during the acclimating period. This is so well known that an acclimated horse or mule is worth much more than one not so protected.

Slaves from Missouri, Virginia and Maryland, suffer as much if not more from debility, than the whites, during the first and second summers. I have seen some whose tongues were pale and flabby, whose pulses were feeble and irregular. In these cases the muscular power is lessened; the skin is covered with an abundant, cool perspiration, and sometimes, there are palpitations of the heart, not unlike those which attend organic, rather than functional disorders of that organ, requiring the horizontal position, than which nothing is more important for the removal of these affections during solar acclimation.

Solar and terrestial heat, differ essentially in their action; on health the latter seems never to produce any morbid effects, resembling sun-stroke, though many firemen in boats, foundries and furnaces, are exposed to a high temperature. The solar rays may undergo some unknown modifications from local causes, independent of mere calorific influence.

In Louisiana, solar asphyxia is rather an *urban* than a *country* disease, affecting those not thoroughly acclimated to the city. The persons alluded to in the following extract, were doubtless unacclimated. "In 1821, H. M. Frigate Liverpool, was proceeding from Muscat to Bushire, the weather gradually increased in warmth, double awnings were spread, the decks kept constantly wetted, and every precaution used to prevent the exposure of her men; yet in one day, from a *species of coup de soleil*, she lost three lieutenants and thirty men. If, for however brief a period, they exposed themselves to the sun, they were struck down senseless. The frigate's main deck at one time, is described to have resembled a slaughter house, so numerous were the bleeding patients. (Travels by J. R. Wellstead, Esq., F. R. S. F. R. A. S. vol. i. p. 75, 1841.)

Upon the 24th of May, 1839, after visiting a man who fell asphyxiated, in the St. Mary's Market, and who lived only twenty minutes, I called at another place to visit a patient, and while in the house, a man of very robust appearance, fell with great force upon the floor, causing the blood to flow from his nostrils freely. He soon recovered, and informed me that

he had been exposed to the sun, and had fallen once before during the day, but feeling very well as he said, he declined the offer of my medical services. I met him daily for some time after this occurrence, in good health. He declared that no pain or inconvenience attended his falls except some bruises.

Solar asphyxia, sometimes has taken place in the shade, immediately after exposure to the sun, and, even as late as five or six o'clock in the evening. In several instances, the patients came in at five o'clock, P. M., and fell unknown to any one, and were not discovered in their rooms for an hour or two. Attacks late in the day are not so quickly fatal, as those occurring between noon and the middle of the afternoon.

If the attack happen in the hottest part of the day, it terminates in death, in about half an hour. July 26th, 1838, at 3 o'clock, P. M., when the thermometer placed against a brick wall, upon which the rays of the sun struck obliquely, stood at 130°, I was called to visit a paver, a stout middle aged man, who fell in Fourcher street, near my office. I saw him within five minutes after his fall, his skin intensely hot, breathing noisy, irregular and with subdued sobbings, unable to swallow, pupils rather contracted, eyelids nearly closed, pulse extremely variable, irregular and quick. A vein being opened, the blood jetted and stopped alternately, the pulse becoming gaseous as the blood flowed. Ice water was poured upon the head and neck, a mustard paste was spread over the body. He lived thirty minutes, expiring upon the pavement.

If the attack should happen late in the afternoon, it may last from one to two hours, or even longer. I have had at least five to six cases, in as many years, where persons have not long before sunset quit work on account of the heat, rather than from any sickness, they have returned to their rooms, when an hour or more after, they have been found accidentally, in a dying state from solar asphyxia, not having made any noise to arrest the attention of the family.

The most usual place of attack, is among paved streets and brick walls, or upon the levee, where there is no shade. The structure of our wharves and levees, would admit of many shade trees, without interfering with the utilitarian cravings of commerce. Such an improvement would be alike ornamental and useful.

Almost the only persons subject to this malady, are white males, who labor in the sun, and who have not passed through the acclimating period of three or four years. I never saw but one negro die from this cause. He fell in Julia street, Aug.

2d, 1837, and lived about an hour. He was very stout, but I do not know whether he had been acclimated. A negress, while at the washtub, was struck down. I found her senseless, speechless, and breathing with some difficulty, but she retained the power of swallowing; and by the use of cathartics, sinapisms and blisters, recovered in two days.

It is often impossible to get exact histories of the premonitory symptoms. In some instances the patient has not probably had any. The history of the case is something like the following. He had eaten his dinner as usual at noon, urged by his wants or love of gain, he went forth to brave the heat of the sun. The walls, roofs and pavements, now heated to the utmost radiate an intense heat, the temperature exceeds that of the human body, from 30° to 40°. The laborer, perhaps, wears a thin straw hat, and has his hair cut close, in order to keep the head cool; this in fact, exposes the head to the solar influence much more than a thick coat of hair, and a wool hat would do; from the same false theory, he wears a thin cotton shirt, which is the only garment with which his chest is covered, and which, when saturated with sweat, affords but a feeble resistance to the conduction of heat into his body. Now placed in an atmosphere 30° or 40° hotter than his body, it is plain that a blanket coat, or still better, two shirts, one of good thick flannel or wool, next the skin, and one of cotton over the other, would be a great defence against the sun, affording the coolest kind of dress, except to such persons as are in the shade.

Thus thinly clad, the laborer engages at the hard exercise of rolling cotton bales, loading or of unloading ships, coopering, digging or paving. The exercise increases the influence of the atmospheric heat; he finds his skin becoming hot and dry, the next instant he falls, or perhaps, he may conclude to "knock off" from work. He proceeds homeward, a square or two, before he drops to rise no more; the passers-by collect around him; some run for a doctor, some apply ice to his head, and the first bleeder that can be had, perfoms blood-letting. From the total loss of sensibility in the patient, the first impressions of the physician, lead him into the belief that the malady is apoplexy. Of this, more hereafter.

The patient's mouth is found rather open; the under jaw has fallen; a tenaceous mucus appears between the lips and in the nostrils; the breathing is irregular, unequal, laborious; the chest not expanding and oontracting well, reminds the beholder of the voluntary efforts which patients sometimes make in fractures of the ribs, and pleuretic or rhumatic in-

flammations, to prevent the movements of the chest, necessary to full breathing. The wind-pipe moves violently up and down, the abdomen and diaphragm rising and falling simultaneously. The breathing is noisy, but not stertorous. The sound may be heard several yards from the patient. Just below the clavicles, the sounds as heard through the stethescope, are very remarkable. Some are acute, some are dull, with a puffing or roaring sound. By applying the hand to the chest, a bubbling or boiling could be felt beneath. As death approaches, these noises recede from the extreme branches of the wind-pipe, and occupy the upper proportions of that tube. At length the accumulating mucus obstructs the passage, an involuntary effort is made to breathe, but in vain; yet sometimes, as in the fatal moment of croup, one or two additional respiratory movements take place. Almost always, the breathing stops *suddenly*, by a strangling fit. Often at the instant of death, or at the instant after the cessation of respiration, the face turns almost black, and the veins of the forehead swell, as if a violent effort was being made to get another breath. Before breathing ceases, retching sometimes take place; or a kind of strangling cough, or an inarticulate moaning like that from some of the dumb animals, when in pain; or perhaps there is a kind of suppressed sobbing or sighing like that caused by sudden immersion in cold water. Yet in everything except respiration, death takes place with the utmost tranquillity, not being accompanied with spasmodic or convulsive distortions, so common in fevers and affections of the brain. Be it what it may, the cause of death begins, continues, and ends in the breathing aparatus.

The pulse is hurried, hobbling and unequal; very often gaseous or air-like, but never slow, hard and large, as in apoplexy and some other diseases. The external veins are not full, and the arteries of the arm are easily compressed by a ligature. When a vein is opened, the blood sometimes trickles, then starts in jets, stopping and starting several times. As the blood flows, the pulse becomes more and more gaseous, the heart diminishes, perspiration begins, and strangulation almost immediately follows.

From the commencement of the disease, the power of swallowing is totally gone in almost every case. Whatever is poured into the mouth, runs out or rattles in the throat, according to the position of the body. I have given a mixture of mustard and salt, or ipecac.; but I am now satisfied, that to put any thing into the mouth, is not only useless, but positively hurtful, as it often drops into the windpipe. The eyes

are not projecting, discolored or rolling, but generally maintain their parallelism, though they are somtimes turned upward; they are less closed than in sleep; the pupils are perfectly natural; the power of winking is totally lost; the eye is lustreless, and expressive of a dying state. The patient is usually found lying on his back; he has no power to change his position; his neck, body, and limbs are free from rigidity or motion throughout the attack. In the act of dying, I have noticed a slight curving of the body laterally, with a feeble contraction of the fingers. In solar asphyxia, the symptoms, and the manner of death, are more uniform than in any other malady. The heat of the body, both before and after death, is a most remarkable circumstance. In the hurry, incidental to a death so sudden, I have not had an opportunity of applying the thermometer, to ascertain the exact temperature; but judging from the sense of touch alone, it would seem much greater than in the hottest fevers. The heat may be felt, radiating from the patient's body, at the distance of two or three feet. In cases where the patient has not been bled copiously, the heat is very pungent. The heat of the body continues, generally, many hours after death, including the whole night. This is the more remarkable, as our nights are not hot and sultry, but accompanied with breezes, which, by morning, cool even the walls and pavements.

After the death of the lungs, or the cessation of respiration, the heart and arteries will, in some instances, continue to act.

Case.—Mr. C. died of solar asphyxia, on the evening of July 24, 1836. About an hour after he had been laid out, two messengers called on me to visit the corpse, which was supposed to be alive. I found the body as warm as at death, though it had since been washed. I found a slight pulsation at the wrist, and a feeble motion of the heart. Dr. Young, of this city, was lately called, under similar circumstances, about two hours after breathing had ceased, from sun stroke. He found the body very hot, and, as he thought, slight motions of the heart and arteries. I dissected two bodies at the same time, that had died the day before, and found the heat of the trunks about equal to that of a person in health.

After death, the face and neck become of a blackish or purplish, spotted hue; a mucus foam, often mixed with blood, begins, soon after death, to issue from the mouth and nostrils, and is very copious, in many cases, the day following.

So Asphyxia, or Coup de Soleil, has long been regarded as apoplexy: the entire loss of the senses—the universal paralysis—all seem at first view, to sustain that common, but erro-

neous, opinion. In the worst cases of apoplexy, the patient is not always instantaneously deprived of volition, feeling, and motion. The apoplectic, in the early stages of the malady, may be awakened, and can answer, though not able to speak more than a word or two. He will generally open his eyes on being spoken to; can swallow, and will start from the lancet, or the application of ice; and he possesses some power to move the muscles. Nothing of all this happens in solar asphyxia. Effusion of blood upon the brain, extravasation into its ventricles or substance, as well as congestion, are much more gradual in their effects. The depression of large portions of the skull, and the presence of enormous clots of blood upon the brain, do not destroy all sensibility. In trephining the skull, while the patient seemed in a deep, snoring sleep, I have sometimes found it necessary to cause his hands to be held down, as he evidently felt pain from the operation.

The worst cases of apoplexy last from twelve to twenty-four hours, generally; solar asphyxia, as many minutes. Apoplexy affects one side, or half of the body, with palsy, and sometimes is attended with convulsion. After the apoplectic fit goes off, the palsy often remains; sometimes, permanently. Nothing of the kind occurs in solar asphyxia. In the former, the breathing is infrequent and snoring, the pulse is slow and hard; in the latter, the breathing is quick and rattling, the pulse rapid and gaseous. The former happens to the rich, the luxurious, the sedentary, the corpulent, the plethoric, those who have thick short necks; the latter happens to the poor, the laborer, the exposed, who undergo hardships. The former happens in cold weather and in hot, in the day time and at night; the latter, only in hot weather, and during the day. Solar asphyxia has no premonitory symptoms, except a sudden heat, and dryness of the skin; neither headache, scintillations, or any cerebral affection. Apoplexy has well known premonitory symptoms. The following passage is taken from the April No. (1841) of that treasury of medical science—Johnson's Med. Chir. Rev.—and is illustrative of this position. "Napoleon, who dreaded apoplexy, asked Corvisart, his first physician, for some information respecting this disease. Sire, replied Corvisart, apoplexy is always dangerous; but it is *always* preceded by certain symptoms; nature seldom strikes the blow without giving warning. A first attack, which is always slight, is a *summons without costs—sommation sans frais;*—a second, *summons with costs—sommation avec frais;*—but a third, *is an execution on the person—prise de corps.* Corvisart, himself, afforded a melancholy proof of the truth of his assertion."

Solar asphyxia is probably an universal lesion of the nervous system; but more particularly of that part which is necessary to the pulmonary circulation. The blood which suddenly accumulates in the lungs, ceases to be arterialized; it gorges not only the blood-vessels, but infiltrates the pulmonary substance, forming the most perfect example of hyperœmia, and even penetrates the coverings of the lungs,—*pleura pulmonalis*,—and is copiously effused into the cavity of the chest, as I have seen several times. In this contest, the lungs are, probably, throughout the attack, in a collapsed or passive state, permitting the blood not only to distend its proper vessels, but to permeate readily throughout the pulmonary texture, until the lung is, perhaps, one-fourth heavier than is usual. Whether the pulmonary congestion be the primary or secondary condition of insolation, I will not say; but I must remark, that of all morbid appearances, of a congestive character, this is the least equivocal, so far as I have examined. Here nothing is ambiguous; the congestion and hyperœmia, are truly wonderful.

Although physiology teaches us that man is endowed with the powers of maintaining the same heat of his body in all climates and situations, with few exceptions, still it is possible, under peculiar circumstances, that the body may become actually heated. A chemico-vital refrigeration, by means of perspiration or evaporation, is constantly going on—in health, especially—in hot climates. The "fire-kings" themselves, when in a heat of 500° or 600°, would roast and turn into cinders, were it not for this refrigerating process, in conjunction with a vital energy, which for a time neutralizes the accumulating power of caloric. The solar heat probably accumulates upon the surface of the body faster than nature can refrigerate through the lungs and the skin, by evaporation; inequilibrium presses upon the vital energy, which, being exhausted in the contest, as well as by excessive labor, is unable longer to neutralize the excess of temperature—often 40° more than that of the body. Vital chemistry is unequal to the task of preventing the conduction of heat into the body, and death is the consequence.—*N. Y. Med. Gaz., Oct.* 1841.

Employment of Creosote for the cure of affections of the Eye. By G. T. Black.—Two years since I suffered severely from inflammation of the eye, occasioned by a cold, and which, perhaps, from inattention, assumed a chronic form. Frequent attempts at removal were made; first by refrigerant and sedative collyria; then by astringents, zinc, nitrate of silver, &c., which produced but slight benefit. Accident, however, shortly did all that I desired—effected the cure.

Whilst replacing on the shelf a bottle of creosote, a small portion of that which usually lodges round the stopper dropped into the affected eye. For a few minutes the pain was extreme; the existing inflammation was also superadded to: these effects were only temporary, soon subsiding into ease, and a sensation of coldness in the eye was experienced. From this time the inflammatory action greatly weakened, till complete restoration took place; subsequently I reflected upon the palpable and sudden alteration for the better, and determined to put the means to the test of experiment, to confirm or annul the claim of the agent. The comparatively few cases, however, which have since fallen under my notice, or rather under my immediate care, do not justify my putting the remedy forward as a specific; yet, in the majority of ophthalmic cases, particularly when of a chronic nature, I believe none of the means now usually employed promise fairer, as a therapeutical agent, for their speedy removal. Three cases are enclosed, in addition to my own, in which I have been happy enough to succeed.

Case 1.—A man, aged 40, temperament nervo-bilious; symptoms much as usual, but severe; redness of the conjunctiva adnata, &c.; excessive pain, intolerance of light, and lachrymation; thirst; headach; preternatural heat of body; great pulsation of the temporal arteries, and other febrile symptoms:—venesection to twenty ounces; calomel jalap purges, abstinence, and poppy decoction. These but ill succeeded. Sedative lotions, tartar emetic in nauseating doses—slight benefit. Calomel and opium three times a day: vessels of the conjunctiva still distended, but less bright; general health better; less headach, &c. Patient thoughtlessly absented himself for two days: on next appearance the eyes apparently much the same, but complains of dimness of sight; stimulating lotion; no evident change. Creosote lotion,* to be

*The formula of the lotion employed, gradually increasing the strength according to circumstances, is

R. Creosote, m. iij;
Compound tincture of lavender, m. xx;
Distilled water, ℥ ss.

used three times a day. At the expiration of a week, less redness, and no dimness of sight. I have once seen him—quite recovered.

Case 2.—A young man, aged 18, (lymphatic temperament,) while at his usual employment had a piece of lime accidentally thrown into his eye, which produced inflammation, that ended in an ulcer near the internal canthus. Upon a subsequent attack from exposure to cold winds the cicatrix spread to a great extent, bordering on the margin of the pupil, attended with indications of chronic inflammation. As far as I conveniently could, the excrescence was removed by knife; the after-application of creosote, in an undiluted state, diminished the remaining portion, and dissipated the inflammation.

Case 3.—A child with *ophthalmia tarsi.* It yielded to none of the usually employed remedies, but gave way to the application of the creosote ointment, and the internal administration of the disulphate of quinine. I am fully aware how generally the therapeutical properties of creosote have been called into notice, such as an application to burns and ulcers, in herpetic, furfuraceous, squamous, and crustaceous skin affections, in bronchitis to promote expectoration; in toothach; in atonic rheumatism, &c.; but I have not yet seen any account of its use in affections of the eye, which will, perhaps, excuse me, should such have been the case, for thus taking attention from more important matters.—*Lancet*; *Med. Examiner.*

Division of the Genio-hyo-glossi Muscles for Stammering. By Alex. J. Lizars, M. D., Lecturer on Anatomy and Opertive Surgery.—P. M., aged 35, had stammered from his infancy. The difficulty was evidently caused by spasmodic contraction of the muscles of the tongue and neck. The tongue, upon examination, was found to be shorter than natural. I operated in presence of my assistants, Messrs. Riccard and Hole, and two of my pupils, Messrs. Collyns and Tibbets.

The instruments employed were, a straight sharp-pointed bistoury; a curved probe-pointed bistoury, with the cutting edge about an inch long, the remainder of the blade being blunt; a four-headed sling, or roller, and a compress of lint.

The patient having been placed in the sitting posture, with

the sharp-pointed bistoury I made a puncture, rather less than a quarter of an inch in length, through the integuments of the lower part of the chin, about an inch posterior to the symphysis. I then pushed the curved bistoury gently upwards and a little forwards, until I saw its probe elevating the mucous membrane of the floor of the mouth; placing the forefinger of my left hand upon the probe-point and mucous membrane, I turned the cutting edge of the instrument to the right, and divided the muscles of that side; the bistoury was then carefully brought back to the mesial line, and the other muscle having been divided in a similar manner, the instrument was withdrawn. The compress of lint was then placed on the wound, and the four-headed sling applied in the same way as is done for fracture of the lower jaw.

Very little blood was lost during the operation; and after its completion the hæmorrhage was entirely stopped by the compress and bandage. Every thing went on favorably; the bandage was removed on the third day, by which time the wound had healed; and the patient resumed his usual occupation on the fourth day.

Immediately after the operation the patient experienced no difficulty in speaking, and the same has continued since. Upon examining the mouth after removing the bandage, blood was observed beneath the mucous membrane in the line of the submaxillary ducts; this was absorbed by the tenth day, and the patient was completely cured.—*Lancet; Med. Exam.*

Effects of Calculus in the Female Child. By George A. Rees, M. R. C. S.—The following is the only case of the kind I have met with in the female out of nineteen thousand children who have been under my care; I consider, therefore, that if briefly recorded it might be worthy of notice in your valuable Journal.

Ruth Mole, aged four years, was brought to me laboring under retention of urine, the mother stating that the child had not passed any water for two days and nights, and that the bowels had not acted during the same time.

July 12. There is considerable fever; great pain; constant moaning; the head hot, and tossed from side to side; the pulse small and frequent; the tongue dry, and covered with a brownish coating; there is some delirium; the abdomen is

hot and tense; the bladder perceived to be much distended, extending up to the umbilicus; the external organs of generation are inflamed; the clitoris distended; the nymphæ slightly œdematous.

The distress of the child demanding immediate relief, a flexible catheter was introduced, and twelve ounces of turbid urine were drawn off, and an active aperient was ordered.

13. Immediate relief followed the abstraction of the urine, and the child slept for four hours. The bowels have acted twice freely; there is constant inclination to go to stool, and considerable straining, causing the bowel to prolapse. No water has passed since yesterday; the bladder is again palpably distended, and the same state of the external organs perceptible, but the fever is much abated.

The prolapsus ani and the state of the external organs of generation so analogous to what occurs in boys with retention of urine from urethral calculus (in whom erection of the penis with œdema of its integuments are the principal symptoms,) led to the suspicion that the cause of retention in this instance might be calculus, which suspicion was found to be correct by the introduction of a probe into the urethra. It was, therefore, determined to leave the bladder as it was, unless urgent symptoms supervened, in the hope that the pressure of the urine might expel the stone from the passage.

14. The child is much the same in all respects, but the urine has dribbled away in small quantities since yesterday. The stone may be felt with a probe still lodging in the urethra. After a little trouble this was caught hold of by means of a small pair of common forceps, and brought forward to the orificium urethræ, through which its size prevented its coming without violence sufficient to produce laceration; a small incision was, therefore, made, as less likely to be followed by incontinence of urine, and the stone extracted.

16. All symptoms relieved, but there is incontinence of urine.

22. The child is free from all symptoms, the incontinence of urine having ceased for the last four days.

The calculus is five lines in diameter, weighs eleven grains, and is nearly perfectly round. I believe a calculus of any other shape *could* hardly produce such symptoms in the female child.—*Lancet; Med. and Surg. Jour.*

Death by Irritation.—From the Boston Atlas we learn that Henry Cooledge, of Framingham, Mass., recently died under the following singular circumstances. Having shaved the face of his dead father, he soon after used the same razor in shaving himself. Although the father had died a natural death, and nothing remarkable had been observed in the manner of his decease, the face and head of the son began to swell almost immediately after having finished the operation of shaving, and he was himself soon a corpse. The absorption of virus from the dead body, if introduced on the edge of the instrument into the system of the son, seems not to have been there sufficiently long to have circulated, and his death is to be imputed, therefore, according to the writer in the Atlas, to irritation.—*Boston Med. and Surg. Jour.*

Iodide of Potassium. By James C. L. Carson, M. D.—The perusal of the article "Iodide of Potassium," in Pereira's Materia Medica, brings to my recollection a case which occurred in my practice about three years ago. I ordered a gentleman three grains of iodide of potassium in a draught of peppermint water, three times a day. When he had taken the medicine three times he felt poorly; and in the course of an hour after the fourth dose he was attacked with a violent shivering fit, followed by intense headache, heat of skin, constant thirst, quick and very full pulse, and vomiting and purging at the same time. These symptoms were succeeded by great prostration of strength. Notwithstanding the exhibition of demulcents and opiates the purging lasted for several days. The effects of the medicine in this case were so violent that I have little doubt, that if he had taken another dose, his life would have been forfeited. This is the only instance, which I have seen, of the iodide of potassium producing unpleasant effects in doses under ten grains.—*Ibid.*

THE WESTERN JOURNAL

Vol. IV.—No. V.

LOUISVILLE, NOVEMBER 1, 1841.

PUBLICATION OF MEDICAL BOOKS IN CONNEXION WITH THIS JOURNAL.

We ask the particular attention of our readers to the advertisement which our publishers have enclosed in this number. It sets forth, that, under the direction of the Editors, they propose hereafter to publish, in connexion with each number of the Journal, from 80 to 100 pages of some medical work, so as to bring out, annually, two volumes of about 500 pages each. This addition however will be sent to those alone who desire it, and signify that desire in the manner pointed out in the circular; all other subscribers will receive the Journal *only*. Three classes of medical books will be thus published. 1st. Original, chiefly by the professors of the Medical Institute. 2nd. Translations from the French and German. 3rd. English, Scotch and Irish works, not previously reprinted in this country. The two latter classes will generally be accompanied with notes and additions, by some one of the professors. This enterprise will commence with our 5th volume, on the 1st of January, 1842.

The postage on the works thus published, will be for each volume

of 500 pages, about 37½ cents to those who live within 100 miles of Louisville, and 62½ to those who reside at a greater distance; but the difficulty which physicians, living in remote places, necessarily encounter, in procuring books from the eastern cities, must, we presume, render this method of obtaining them acceptable. The subscription to the Journal thus enlarged, will be ten dollars a year; for which sum the subscribers will receive four volumes, or about 2000 pages of matter, original or recently published in Europe; an amount sufficient, independent of other purchases, to keep him informed on the progress of discovery and improvement in the profession. The volumes of the first year, will embrace an elementary treatise on Pathology by Dr. Drake.

Such is the plan of our publishers; but they will not enter upon it, unless a sufficient number of subscribers should be obtained; and of course they will not make arrangements for its execution, before they hear from the patrons of the Journal. As it is proposed to commence on the first of January next, we respectfully request our readers to give prompt attention to the circular, that the number of the Journal for that month may not be delayed.

PROGRESS OF SCIENCE.

It must gratify the friends of sound and solid science to learn, that the *College of Professional Teachers*, at their late meeting in our sister city of Cincinnati, requested *doctor* Rosenstein, the famous homœopathist, to enlighten them and the good people of that city, with a lecture. Such a thirst for knowledge is highly auspicious. We presume the *doctor* administered to each member of the College, the true homœopathic dose, of a hundred thousandth part of a grain of truth, mingled in a glass of gall and wormwood against the *regular* profession. But why should the College have limited itself to the homœopathists, when the Steam doctors, Negro doctors, Indian doctors, Brandreth doctors, and others were at hand, and ready to expound their respective systems? Such partiality we cannot approve; it is at war with the true democracy of science, and, if persisted in, will undoubtedly bring the College into disfavour with the friends of those improv-

ed systems, which are more numerous than the advocates of homœopathy. In this way the College will render itself unpopular and diminish its influence. Perhaps, however, it has appointed committees to make reports at the next meeting, on those reformed methods; and thus obviated the charge of partiality. If so, very well; but lest it should not have regarded any of the other new improvements as worthy of encouragement, (after contemplating the beauties of homœopathy) we take the liberty of presenting the first rude draft of a preamble and resolutions, to be adopted at the next annual meeting of the College.

Whereas, in the opinion of this College, established to promote sound learning and exact science, the world has been held in bondage for three thousand years, by a succession of men calling themselves the disciples of Hippocrates, who profess to have made discoveries concerning the laws of the human body and the means of preventing and curing its diseases, whereby they have imposed on the unwary, to the great detriment of their constitutions; and whereas a number of original geniuses, in modern times, have made important hygienic discoveries, which are rejected by the aforesaid disciples of Hippocrates, through jealousy and envy of said discoverers, and from malice prepense towards society; and whereas it is the duty of this College to foster neglected genius, not less than to humble the pride of science, therefore—

Resolved, That a committee of seven members, not physicians, be appointed to make a report, to the next session of the College, in favour of the following newly discovered systems of medicine for the people, towit:

1. On Hanemannism, or Homœopathic doctoring;
2. On Mesmerism, or Magnetic doctoring;
3. On Cornstalkism, or Indian doctoring;
4. On Radicalism, or Root doctoring;
5. On Brandrethism, or Pill doctoring;
6. On Thompsonianism, or Steam doctoring;
7. On Guineaism, or Negro doctoring.

Resolved, That said committee be instructed, to warn the community against the pretended discoveries of Hippocrates, Celsus, Morgani, Harvey, Sydenham, Bichat, Rush, and others of like kind, and against the schools of medicine in the United States, where their writings are received as authority.

Resolved, That the members of this College will henceforth, patronize some one of the aforesaid seven wise men; preferring, however, the last, from the well known curative powers of a seventh son.

Resolved, That should any other *College of Professional Teachers,* attempt to forestall this, in the proposed reform of the medical profession, it shall be the duty of the "Executive Committee" to appoint a special meeting of the College, that it may, by early action, not lose the honor of achieving what it is the first to undertake.

Resolved, That in all future meetings of the College, the practisers of the aforesaid seven new systems, shall be entitled to seats; and that such of them as cannot write their names, shall be allowed to subscribe the constitution by making their marks. D.

SULPHATE OF QUININE IN CONGESTIVE FEVER.

Dr. Preston Capshaw, of Madison county, Ala., in a letter of the 30th of September, writes as follows: "I am now living in one of the sickliest spots in North Alabama, where I have learned much on the treatment of fever. We have all grades, from the mildest to the most malignant. The routine practice of many of our physicians, consists in giving large doses of calomel or —— pills, so as freely to evacuate the bowels, to be followed in the first intermission or remission, by liberal doses of quinine. Venesection and the cold dash are seldom resorted to, and when the latter is applied, it is too often without discretion, whereby mischief results to the patient. Emetics, sinapisms and blisters are, also, occasionally used, but the *sine qua non* with the gentleman of whose practice I am speaking, is to disgorge the liver by means of active mercurial cathartics. This method succeeds very well in ordinary cases; but where much congestion is present, or there is a great tendency to it, I think I have seen manifest injury and even death, follow as its consequence. Under the influence of this conviction I was led to pursue a different practice, and the results have been such as to assure me, that in the congestive, if not in other forms of autumnal fever, cathartics are not only unnecessary, but contra-indicated and injurious.

In congestive fever, as you know, there is a great influx of blood

upon the viscera, with cold extremitias, prostration of strength, &c., indicating the patient to be in a chill. This state is followed, sooner or later, for the few first paroxysms, by a partial reaction. My plan in the treatment of such cases, is simply this: when the patient is cold, I direct all my efforts to getting him warm. My means are the cold dash and warm bath alternately, and frictions with mustard, ammonia, &c. When I get them warm, or there is even partial evidence of reaction, I give twenty grains of sulphate of quinine, and repeat it every hour, till four or five doses have been administered. The medicine sometimes produces disagreeable symptoms, such as deafness, blindness, &c.; but I have invariably found my patient better of his fever the next day, after which he continued to mend. When the "fever is broke," if he should be costive, it is well, or, perhaps, in some cases, necessary to administer a laxative, though I find that the great destroyer "black bile" may flow off *spontaneously*, as the patient recovers. I must state, however, that I have as yet pursued this practice in only five decidedly well-marked and violent cases. In two of them I gave no purgative whatever; in two, whose bowels were tardy, I gave castor oil, in one, rhubarb and magnesia. All got well." D.

URTICARIA.

In a late letter from a distant state, a medical friend says—"If you know of any means of cure for *chronic* urticaria, besides those usually laid down in the books, you will oblige me by stating them, either through the Journal or by letter. I have a patient who has had the disease from infancy, and been treated by the most skilful physicians in this part of the country—all to no effect. She is 19 years old, and apparently in good health in all her functions. The eruption makes its appearance more or less every day, and is very distressing. Can it be cured."

The demand of our friend is one which we cannot meet. We can only confess our own inability, and call upon our more skilful brethren to answer the question affirmatively and point out the means.

It has happened to us, to see many cases, both acute and chronic of

this singular malady; the former have readily yielded—the latter for the most part have proved refractory. We have often observed a high degree of nervous irritation connected with *acute* urticaria, never a decided phlogistic diathesis, and we have found the administratisn of large doses of opium or its preparations, followed by an emetico-cathartic, of great efficacy. Bloodletting has not been of much benefit. We have, now and then, seen a compound of nitrate and bitartrate of potash do good. But in *chronic* urticaria, we have had little success. It has been said to depend on gastric or hepatic derangement, but we recollect the case of a gentleman, who labored under it for many months, during which his digestion was good, and the biliary secretion perfect, both in quality and quantity. He suffered most in winter; and the intolerable itching which arose under exposure to cold, was removed by the heat of a warm fire. Years have passed away, during which his general health has been good, but he is still more or less affected with this malady in winter.

We shall be happy to publish any thing that is valuable on this subject. D.

CONSULTATIONS THROUGH THE JOURNAL.

While writing the above, it occured to us, that many consultations and much reciprocal instruction might be conducted, through our monthly. We refer of course to chronic diseases. Cases are constantly occuring of an eccentric or anomalous character, whlch puzzle the medical attendant, and naturally turn his mind towards his professional cotemporaries. All such might be stated in the Journal, the readers of which could not fail to peruse them with interest, and whoever could, would no doubt bring to bear upon them, the results of his own experience. In this way much fresh and valuable information might be extensively communicated. Whenever cases are thus submitted, they should be drawn up with care. Fulness, clearness and brevity should characterize them; and while nothing of moment ought to be omitted, nothing unimportant should be introduced. All communications thus prepared will be promptly inserted. They must be subscribed by their authors, but the names will not be published unless requested. D.

ARSENIC SOLD FOR ANTIMONY.—EMPOISONING.

Our friend Prof. J. Warder of Cincinnati College has communicated to us the following fact. A livery-stable keeper in Cincinnati applied to an apothecary for a quantity of what the farriers call antimony, (the well known sulphuret of that metal) and as he supposed obtained it. Administration was made in the usual way by mixing the powder with the provender of his horses. The consequence was that several of them were killed. The symptoms were not noted. A portion of the poison, not exhibited, was brought to the Professor who, on examination, ascertained it to consist of the impure arsenic, commonly called cobalt, or flystone.

Some of the horses were examined after death and exhibited evident traces of gastric inflammation.

We think this a favorable opportunity to put forth a few hints on the state of our establishments for compounding and selling medicines in the West. They are of three classes:—1st. The village and country merchant's dry goods' stores—2nd. The Doctor's offices—3rd. The Druggist's and Apothecaries' shops. The first have grown out of the necessities of a newly settled country; and are now seldom met with in any of our larger towns. The number of articles kept by merchants is generally few; and they are commonly sold in bulk, except tartar emetic and calomel; and therefore dangerous accidents are not likely to happen. The second class deserve a more extended notice. A student is generally the compounder of prescriptions in a Doctor's office, and no doubt he is *sometimes* qualified for the task, at the time it is confided to him. Such, however, is not always the case. The first study to which he is put, is the bones, when it *should* be the medicines he is practically to work among. Having gone through a tedious and too often unprofitable course of anatomy, he makes a superficial survey of physiology, and then takes up a work on therapeutics, or the practical application of medicines—sometimes even a treatise on the practice of physic! After this, there is a reluctant and unproductive recurrence to chemistry, pharmacy, and the natural history and sensible qualities of medicines—all of which should have been studied before any thing else. On this plan, or rather according to this practice without plan, the student passes through his private pupilage, engaged more or less in compounding the prescriptions of his

preceptor, with a most incompetent knowledge of the properties and chemical composition of the articles which he is every day mingling together; and is of course liable to make mistakes. In illustration, we may mention one, which proved fatal. A physician of this state directed a certain quantity of ipecac., or some other medicine, to be mixed with a prescribed quantity of *aqua font.* for a small negro child. Instead of the latter, his student put up *aqua fortis*—the child took it and was killed. Had that young man understood pharmacy and the history and properties of medicinal agents, it is not probable that so serious a mistake could have occurred.

The third class, in most of our cities and larger towns, have, now, in their hands, the preparation and putting up of most of the medicines that are prescribed by physicians; and while the student of medicine generally has the recipe from the mouth of his preceptor and puts it up from memory, the apothecary's clerk has before him the written prescription. On the manner in which this is executed we must say a word. It should be in a legible, open hand, with the name of the patient, the date, and the name or private signature, of the physician, attached to it. How soldom it has these safe and essential requisites, any one may satisfy himself by examining the files of our shops, in Louisville or Cincinnati. If they always had the first, distinct legibility, the matter would not be so bad; but many are so obscurely written, that without a thorough knowledge of medical hieroglyphics, the compounder is liable to fall into egregious blunders. If the physician would arraign the apothecary before the tribunal of public opinion, he should enter it with clean hands. If, as he claims, he is the superior, let him set a good example to his inferior—let him show, on the face of his prescription, that he has thought, at the moment of writing it, of the great necessity of having it correctly understood. He will then have substantial ground to stand upon, in charging the druggist who has fallen into error. Many physicians, moreover, do not read their prescriptions after writing them, by which, mistakes of a formidable kind have passed uncorrected, till their effects were felt by the patient, unless the apothecary rectified them, which has not often happened. While on this prolific subject, we must add a paragraph relative to the language in which prescriptions are written. In the United States where the Latin language is so little cultivated, it is affectation and folly, to write, we should rather say, attempt to write, prescriptions in that language.

Not one in a hundred (any more than ourselves) are capable of writing Latin prescriptions; and if they were thus composed, a still smaller proportion of our apothecarie's clerks would understand them. Moreover, we ask for the advantage of such a practice? We can see none, and wish it were universally abandoned. But we must return to the duties and qualifications of the compounding druggist.

It is the custom of our city apothecaries to take small boys as apprentices and clerks, who are often illiterate, and, always, unacquainted with chemistry and botany, while an elementary knowledge of those sciences, together with a tolerable education, and the age of 15 or 16, should be regarded as indispensable prerequisites. To place a little boy behind the counter of a druggist, as merchants are wont to place boys before their shelves of silks and gridirons, is homicidal; and no physician should sanction it. His own inevitable homicides are more than enough. If he cannot avoid being a principal, he may keep himself from being an accessory, by directing his prescriptions to be sent to shops where none but qualified and careful persons are permitted to handle and put up for use, articles which are the instruments of death not less than of life, when taken in excess. In Europe the apothecary is a man of learning and science—here, too often, he is a mere trader. There, he undergoes a long and laborious apprenticeship—here, he substitutes the probation of weeks, for that of years; and, from the beginning, works among poisons, with as much confidence and unconcern, as a confectioner's apprentice beats up eggs, or licks the syrup from the ends of his fingers. D.

MURRAIN OF CATTLE.

By mistake the name of Dr. John Winans was, in our last number, prefixed to an article on Murrain, written by his partner Dr. John Dawson. It arose from the name of both gentlemen being on the same sheet.

We have just received from Dr. Dawson a letter in which he makes, in reference to that disease, the following remarks:

"I have made no autopsic examinations on Bloody Murrain since I last wrote; but have made many inquiries of our farmers touching

the subject. I find that the estimated *per centum* of loss by the disease, was too high, by perhaps one fourth. My views of its pathology have been confirmed. It is a general practice with those who lose cattle to take out the tallow, in doing which they expose the kidneys, which I am assured are always found "rotten." Mr. Larkins, a man whose veracity is above suspicion, says that in all the examinations he has made for 30 years, he has found the kidneys in that state, with an offensive odour." D.

TENNESSEE LUNATIC ASYLUM.

This institution has been in operation now about eighteen months, but from the following extract from the message of the late Governor of the State, its usefulness would appear to be very much limited by the slenderness of the appropriation made for its support:

"In consequence, however, of the limited appropriation made by that act, it has been found impossible to receive several 'insane paupers,' for whose admission into the institution application was made. It is submitted to your consideration whether suitable provision should not be made for the reception and accommodation of all unfortunate persons in the State for whose benefit the institution was established, and for whose admission application may be made.

"A Report will be made to you during your session by the attending physician of the Hospital, who is by law constituted chairman of the Board of Trustees, containing such information, and making such suggestions, in regard to the condition and future management of the institution, as may be deemed useful in your deliberations upon the subject."

We have had opportunities of knowing that the Hospital is very far from being adequate to the demands of that unfortunate class of paupers, for whose benefit it was mainly erected. Great individual suffering, and as great public annoyance are endured in nearly every county in the State, from the insufficiency of the means of the Hospital to receive insane persons who are too poor to pay their expenses in it. This ought not to be. Tennessee is a State of great resources, and great and increasing wealth. Let her representatives, in the Leg-

islature now assembled, be instructed to provide for the clamorous wants of a class of her citizens who cannot take care of themselves. We hope the intelligent physician who has the superintendence of the Hospital, will favor us with a copy of his Report as soon as it is published. Y.

ELECTRICITY IN NEURALGIC DISEASES.

This subject is attracting much attention, and the medical journals of Europe abound in cases of neuralgia successfully treated by electricity. The forms of its application are various—as galvanism, the electric spark, shock, and aura, magnetism, electro-magnetism, and acupuncture with combined galvanism. Of all these methods, that of the electric-magnetic apparatus, with sponge directors, seems to us the most promising, whilst, at the same time, it is mild, steady, and entirely under the control of the operator as to intensity and duration. In some cases of neuralgia, where the ordinary plans of cure have proved unavailing, this holds out a dernier hope to patients which is worthy of resort. The disease appears to be more common in this country than in earlier times, and especially afflicts the citizens of the larger towns. Some such patients we have now under treatment, by the electric-magnetic machine, and the result of the trials we will lay before our readers in due season. Y.

DEATH OF DR. SATTERWHITE.

The name and worth of this physician are familiar to all who ever passed much time at Lexington in this State, for he was for twenty years engaged in that city in an extensive and reputable practice. We remember him as he was eighteen years ago, a young physician who had gained the confidence of that intelligent community, as a judicious, kind, attentive practitioner and conscientious man. This character Dr. Satterwhite sustained to the time of his death, which occurred on

the 23d of October, suddenly, in consequence of a fall from his horse. The animal became frightened, reared and fell backwards, and in the fall dislocated the neck of the rider. Dr. Satterwhite was a member of the Methodist Episcopal Church, and his life was one of exemplary piety. His example is instructive to the young physician. It proves how much may be done by industry and a virtuous life towards securing the highest popularity in our profession, with its attendant advantages of wealth and independence, unaided by any extraordinary mental endowments. Y.

MEDICAL INSTITUTE OF LOUISVILLE.

The *fifth* class is now assembling at this institution, and promises to be larger than any preceding one. Already about 200 students have reached the city, and if the proportion behind is as large as usual, the class will no doubt reach 250, by the first of December. This is most encouraging success, and must be exceedingly gratifying to the friends of the institution. No Medical School in the country has grown with such rapidity, and with the excellent facilities it possesses for imparting a thorough practical knowledge of medicine, it can hardly fail to maintain a high rank among the American Schools. Valuable additions were made to the library and apparatus, by Professor Caldwell, during his recent visit to Europe, all of which were received before the opening of the present course.

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